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## ORIGINAL LECTURES.

### ON THE SURGICAL TREATMENT OF INFANTS.\*

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YOUR committee having invited me to speak to you to-night upon the "Surgical Treatment of Infants," I purpose to confine my remarks chiefly to personal experience in the means of relieving the principal surgical difficulties which are met with during the first two years of life. If the subject shall occasionally lead me to mention older children, it will be because the line between infancy and childhood is not a marked and well-defined one.

As you are all active practitioners also, it will be unnecessary for me to dwell upon detail, and I shall only touch upon practical points in treatment. The surgery of childhood, as compared with that of adult life, is, aside from congenital defects, sufficiently marked and distinctive to entitle it to separate consideration.

First of all must the children's surgeon acquaint himself with the anatomy of the child. This is rarely done, as the ordinary adult-dissections during a college course give little idea of the size and position of the individual elements as seen in the infant. In consequence of ignorance upon this practical point, many grievous failures have occurred. After unusually large opportunities for the study of both normal and abnormal tissues in the diminutive frame, I am still frequently surprised to note the exceeding smallness of different organs and canals.

Another essential element in the surgeon is tact in the management of the little ones, especially when dealing with those between the ages of two and ten. In hospital cases but little history is attainable, and much depends upon quick perception. Naturally fearful of pain, the patient's mind must be diverted and engaged, or great difficulties in diagnosis will often occur from the fright and struggling. The operator not in sympathy

with children can never secure their confidence. Much will often be gained by quiet observation. It is not a month since my opinion, which at the first few moments of the consultation had been favorable to tracheotomy, was changed by five minutes of close watching, and the result proved the correctness of the procedure. To the person, however, who will carefully study individuality as well as disease, no department of medicine offers so pleasant a return for his labors. My personal experience with children has perhaps made me more hopeful in regard to the power of such individuals to endure pain, shock, and disease than would be indicated by the expressions of other authors; but to me there is no domain of surgery so attractive and gratifying as the treatment of children below the age of puberty. Their natural condition is that of hopefulness, and as soon as the depressing influence of shock, pain, or fear is removed, the normal resiliency of mind and body asserts itself with such rapidity that the results are often surprising.

Again, a child has only inherited taints of constitution to contend against: his viscera are ordinarily in a healthy condition. An adult has not only hereditary, but all the acquired vices occasioned by misuse or abuse of any organ or sets of organs, a circumstance, which often turns the scale in the struggle between life and death. Take, for example, the single instance of the outraging of tissues by either the moderate or the excessive use of alcohol, and every surgeon will testify that even slight wounds may in such an individual quickly develop a fatal attack of mania-a-potu.

Tetanus is not more frequent in infants than in adults, notwithstanding the tendency of the former to nerve-excitability.

In regard to anæsthesia, my experience is that great benefit is obtained by the use of ether when pain can thereby be prevented. In the first weeks of existence I admit that a feeble vitality would contraindicate its use, although I have successfully administered it to a three-days-old infant. After the first or second month I see no reason why we should needlessly inflict pain upon an infant simply because we can control it by brute force. In the examination of fractures great suffering is often inflicted by careless and frequent

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manipulation, and, unless the diagnosis is easy and positive, unconsciousness should be produced. No case of bone-injury should ever be passed by undetected when ether will aid us to solve the question.

In the opening of abscesses, the "primary influence" of ether is so readily obtained that it should be brought into use whenever practicable, as keenness of pain can thereby be avoided.

Fear plays an important part, and may depress the child's system even more than pain: hence great caution should be observed that all knowledge of any operative procedure should be guarded against. When the day for action arrives, let the surgeon quietly and gently state to the little one, if it has arrived at years of reason, just what it is proposed to do, at the same time assuring him that no pain will be experienced, and, if such words be followed by firm, speedy, and judicious management, much agitation and fear will be avoided.

All preparations should be made out of sight and hearing of the patient, and instruments need never be seen by him, except when a strong impression is intended to be made upon the mind of a masturbating boy requiring circumcision, in which case ether may also be omitted.

One word in regard to the method of anæsthetization. It is but natural that a child should be distrustful of any attempt to deprive him of consciousness, a fear which is greatly increased by the injudicious and greatly-to-be-condemned habit of many parents, who systematically threaten their offspring with the expression, "the doctor will come and cut your head off." A few kind words will often quiet the agitation, and simple directions as to the method of breathing will save many minutes of struggling resistance. With very young children the first smell of ether may be masked by permitting them to see cologne poured upon the towel, after which ether may be quietly added, and they will feel that it is a perfume that they are breathing. This device has frequently served me a good purpose. I always allow a good admixture of fresh air for the first moment; but when the child actually begins to cry, then quick action answers best. The towel should now be well saturated, and held firmly over nose and mouth until two or three strong screams and inhalations will yield a full

primary impression, which can be gradually followed up to complete anæsthesia with safety.

Should any symptom of ether-narcosis occur, it is so easy to depress the head of a child or to perform artificial respiration by acting upon the ribs that serious accidents are infrequent. Subsequent vomiting is very common, but is not persistent, and is easily quieted by a small hypodermic of morphia, a procedure which ordinarily brings quiet sleep to the patient. If the child is feeble, I always allow milk up to within two or three hours of the operation, and then administer wine or whiskey in water immediately before giving the anæsthetic. Milk with lime-water and whiskey is usually retained within ten minutes after the first vomiting on rousing. In tedious excisions, not only should preliminary precautions be taken to secure against prostration by shock, but hot-water bags should be ready for use, which, with hypodermics of brandy, may succeed in tiding over a temporary depression which would otherwise end in death. When the loss of blood has been great, especially in acute surgery, important assistance may be gained by transfusion, either of blood or of a warm saline solution.

Under the head of arrest of hemorrhage I would strongly advocate the use of animal ligatures, since the pain often incident upon the removal of threads greatly disturbs the needed quietude of wound and mind.

Thorough asepsis and antisepsis are especially valuable, since we not only secure the admirable results that are attainable by their use, but are also enabled to disturb the child with far less frequency. I am now treating a girl with a railroad crush of the leg which would thoroughly have justified amputation, yet which, under corrosive sublimate dressings, has been disturbed only six times in as many weeks, even though extensive sloughing has occurred. Save upon one occasion, at the height of the process of tissue-death, the applications have been taken away perfectly sweet, and the child has the promise of a reasonably good limb. In my *ante-septic* days I certainly was never able to carry a patient through such a process and keep the temperature (as had been done in this case) below  $99\frac{1}{2}^{\circ}$  all the time, and usually but slightly above  $98^{\circ}$ . With infrequent dressings the irritation of the child is but slight,

and, if pain be also absent, contentment is the rule under proper nursing.

I cannot too strongly emphasize the importance of this latter condition. A kind, quiet, gentle nurse is one of the most valuable assistants in the real progress of the case, especially during the first week following operation. Such care cannot be delegated to untrained and careless people: hence it is absolutely necessary that children should be in separate hospitals or in separate wards, under the best of care-takers. Even in private practice the mother is rarely the best nurse for a child past two or three years of age: a skilled attendant answers far better. In hospital practice I have often been surprised to see how contented and patient the majority of children of even three years of age will become if the mother maintains a judicious absence and the nurse is efficient and kind.

Another point which I wish most emphatically to declare to-night is the fact that congenital defects are most inexcusably and persistently neglected by even good practitioners, under the mistaken opinion either that nothing can be done or that a later period will be early enough. The consequence is that many unfortunates become helpless and hopeless cripples by their physician's advice, since, passing out of his sight and mind, the neglect engendered by his direction, "Wait!" is fostered by parents, ever ready to postpone a dreaded day.

Turning to some of the special surgical diseases of infants, I would say that it is my intention simply to touch upon a few points of treatment without regard to definite arrangement or order, since to consider almost any one of the conditions in full would require an entire evening's discussion.

In a new-born child, the first most probable trouble requiring surgical relief will be *imperforate anus* or *rectum*. Such a condition is not improbable when we remember that the intestine is formed as a closed tube. If the malformation be simply one of occlusion of the anus by a membrane, it would seem to be the easiest of procedures for any practitioner to make an opening; yet I have seen children permitted to die with the entire ischio-rectal fossa and perineum bulging with retained feces, when a simple puncture through a membrane closing an otherwise normal

anus would have given immediate relief. This timidity may perhaps be explained by the fact that occluded anus and imperforate anus are confounded with imperforate rectum and the case is given up as hopeless. In imperforate anus the operation is still a simple one, since a crucial incision, together with stretching of the mucous membrane to the skin and subsequent dilatation with the finger or probe, is all that is required.

When the anus is normal and patulous, but the rectum is occluded by a membrane or is actually absent, then a much more serious condition presents itself, the difficulty increasing in proportion to the extent of the deficiency. Should no meconium be passed within the first twenty-four hours, a careful search should be instituted. The little finger or a catheter passed into the anus will detect the obstruction, or, if the anus be absent, the vagina (if present) may be explored for the abnormal fistule. As soon as the presence of feces can be discovered in the fossa, a careful dissection should be made, keeping well backward so as to avoid the vagina or the urethra and bladder. A catheter should always mark the position of the urethra. There is but little danger, even in deep incisions, if the region of the coccyx and sacrum be followed. The gut found should be drawn down as far as possible and secured, a channel being maintained through the lower rectal region, if necessary, by the finger or by bougies, the latter of which should not, however, be retained constantly in position. There is much less danger from subsequent hemorrhage if the external incision be free, and no fear need be entertained about the ultimate retention of the feces, as, if the child escapes peritonitis and other inflammations, good control of the bowel is always secured; in fact, the chief subsequent danger lies in the formation of stricture. When the length of the bowel will not permit it to reach to the site of the anus, the new opening may be made nearer to the sacrum. Should no trace of the rectum be found within two inches of the anus, it is unsafe further to explore a region where peritoneum would be liable to injury. Either left inguinal or left lumbar colotomy should be performed. The right groin is to be selected if there are evidences of absence of sigmoid flexure. The left inguinal posi-



tion gives a better subsequent opportunity of passing a bougie downwards into the rectum and thus establishing a proper anus. If the colon be full, it will not be difficult to find. In cases of doubt, its distention by air or water through a hypodermic needle would determine its termination. Abnormal openings into the vagina, bladder, or urethra rarely require early operation, but in non-retention of fæces at a later age, Rizzoli's plan of procedure is a good one.

Later in childhood the surgeon is often compelled to treat another condition of the rectum,—namely, *prolapse*. This, if excessive and not yielding to replacement, astringent applications, hot-water bathings, and general constitutional measures, must be cured by the production of linear eschars by nitric acid.

The genito-urinary organs may also require attention immediately after birth. A simple occluded urethra is easily relieved by the careful introduction of a sound or catheter. *Epi- and hypo-spadias* and *exstrophy* of the bladder should not be allowed to go on to adult life without relief. As soon as the child has passed its dentition period a plastic operation should be attempted for relief, since the mental and moral effect of such a deformity has often a marked influence upon the lives of the unfortunates. *Adhesion of the vulva or nymphæ* should not be overlooked, since not only does the nervous system suffer, but the parts may be improperly developed. Separation can almost always be accomplished by the finger or by a probe. An absolutely *imperforate hymen* should never be allowed to remain, if discovered, since, at a later period, if permitted to impede the menstrual flow, serious and even fatal results may follow its division after the uterus and Fallopian tubes have become dilated by the imprisoned secretion. *Imperforate vagina* should receive at least careful diagnostic attention to detect the presence of a uterus, and, if not absent, fuller development will be secured if the passage can be opened during the first few years of life. With a catheter in the urethra and a finger in the rectum, a careful operator can explore safely. I have met with several cases in which the penis was preternaturally *short* and ill formed, the body of the organ during flaccidity being almost entirely concealed in the fatty tissues of the pubis. In such

instances I have removed the prepuce during the first three months of life and have cut away all restricting bands of skin and connective tissue, sometimes even drawing beneath the penis an extra flap of skin when the corpus spongiosum has been short and dwarfed. By such means the fullest amount of growth is encouraged.

*Adherent and contracted prepuce or phimosis* has been the subject of much discussion in regard to the causal influence upon certain nervous manifestations. My views upon this subject have already been published,\* and after two years of additional experience, during which time I have been brought daily in contact with this class of cases, I can reiterate what I then stated,—namely, that while more or less adhesion is an almost constant and normal condition, yet that when urinary, choreic, paretic, or any other nervous symptoms develop, a careful investigation should never be omitted, since a direct relation will in a certain number of cases be clearly evidenced, and removal of the cause will speedily cure the manifestation. The fact that even circumcision does not relieve the symptoms is undoubtedly true in many instances, and I have never claimed that preputial adhesion and narrowing was anything more than one of several factors which should be carefully scrutinized. I have only urged that its influence should not be overlooked; and when so simple an operation as stripping the prepuce from the glans by the thumbs or possibly by the use of a probe is all-sufficient, there can certainly be no argument against removing this one factor. My opinion in regard to the feasibility of drawing back the prepuce in young children, even when the opening seems scarcely pin-hole in diameter, has been greatly strengthened, and circumcision is only necessary when the simpler method described fails to secure a prepuce freely movable over a normal glans. Dilatation even is but rarely required, a few moments of continuous pressure soon revealing the mucous layer, adherent perhaps just about the meatus, which, when loosened, permits the head to pass through the opening, and the corona is freed with the thumbs. Should temporary paraphimosis occur, two probes or a hair-pin slipped beneath the constriction will easily permit replacement.

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*Congenital hydrocele* rarely requires much surgical interference beyond an evaporating lotion of muriate of ammonia or alcohol, as a few weeks will often close the canal if hernia does not coexist, a fact which can be determined by non-translucency and capability of reduction. Should the connection with the peritoneum fail to close, puncture with the application of a truss will usually complete the cure. A hydrocele with closed canal is better treated by tapping and injection than by seton. The diagnosis between *encysted hydrocele* of the cord, *hernia*, and *undescended testicle* is sometimes difficult; but if the surgeon remembers that the former is simply a cyst in some unobliterated portion of the peritoneal coat of the cord; that its rounded shape can be detected if it is pulled well down into the scrotum; that it is usually translucent; that the impulse is not so decided as in the case of hernia; that it returns to the abdomen only by being pressed upward, and not with a slip and gurgle, he will rarely be led astray. A hernia may coexist with either of the above-mentioned conditions, but if non-adherent, careful isolation will settle the diagnosis. Should the hernia become strangulated or the non-descended testicle become inflamed and infiltrated, the most careful examination will be necessary. In retained testicle, its absence from the scrotum will be the first point in arriving at a decision; but even in such a condition the organ might be within the abdomen and an encysted hydrocele present, or the testis might, as has recently fallen under my notice, slip into the tissues of the perineum and be exceedingly difficult to discover. In the case just mentioned it sometimes requires numerous manipulations to cause the missing organ to return to its place in the pouch. Should hernia and retained testicle both exist, a double purpose can be gained by drawing the latter down and pushing the former up, and then applying a truss. The successful retention of the organ within the scrotum is a matter of great difficulty, and removal is scarcely justifiable in young persons unless pain or inflammation ensues. Extirpation, if required in later youth, will probably not interfere with the procreative power of the individual, since one gland will supply all requisite material and the affected one is practically useless from atrophy, even if it is not devoid of

tubular structure. Traction is of little service, as manipulation tends to increase the sensitiveness of the organ. In prognosis it should be remembered that cryptorchism exists in nearly ten per cent. of males at birth, and that descent may occur within the next few weeks.

Simple *umbilical* and *inguinal hernia* should receive early attention, as, contrary to the rule in adults, a cure can often be effected during the first year of life by the persistent use of a truss. In young infants I prefer the hard-rubber variety, as more cleanly. The instrument should be applied during the first few weeks of life, and continued for one or more years. The treatment of strangulated hernia does not differ from that of the adult, but in obstruction of the bowels *intussusception* is so commonly the cause of the blockade that, unless violent peritonitis is present, laparotomy with careful search for the invagination offers the best hope of relief, and, I am glad to say, is rapidly growing in favor.

*Meningocele*, *encephalocele*, and *spina bifida* are complaints that will early require the surgeon's attention, or at least his expression of opinion and his prognosis. If attached by means of a narrow pedicle, constriction with an elastic band is feasible; but, unfortunately, this pedicle is but seldom found. Injection of iodine following tapping is rarely successful, yet is worthy of trial in so hopeless a case. In a large hydro-rachis of the lumbar region lately under my care, which resisted pressure, tapping, injection, and constriction, I was strongly inclined to excise the thin sac and attempt a plastic operation by drawing in towards the median line two flaps of skin from the lumbar region, leaving the vacancies to granulate. Soon after a consultation, in which I was dissuaded from my attempt, the tumor ruptured spontaneously, and death occurred in two days, although frequent tapplings had never produced any nervous symptoms. I had then never seen a record of such a plan of procedure, but only last week I noticed in the *Journal of the American Medical Association*, vol. iv. No. 17, page 466, that Mr. Robson had performed this operation with successful results in two out of four cases. Strict antisepsis was enforced.

*Cephalæmatomata* are usually easily distinguished from *encephalocele* or menin-

gocele, and also from the simpler tumor, *caput succedaneum*, the latter being exterior to the periosteum and more doughy. The blood in a cephalhæmatoma is always confined between the pericranium and the bone-substance, and increases until the second or third day. The hardened ridge around the border of the tumor may give the sensation of an opening in the bone, but the orifice in meningocele is rarely as large as the base of the swelling mentioned. The peculiar crackling feeling upon pressure at a later period is due to the new bone-deposits beneath the periosteum. Absorption so generally takes place in three or four weeks that aspiration or incision is unwise, even though antiseptics be thoroughly practised, unless in exceptional cases when suppuration is certainly present. Lotions have a good influence,—at least upon the brain of the mother.

*Hare-lip* will early require the careful study of the surgeon, situated as it is upon the portion of the body that is most regarded in the æsthetic point of view. Its proper relief therefore becomes a matter not only of surgical skill, but of surgico-artistic skill. The time for the performance of the operation is a point upon which there is a wide diversity of opinion. My rule is to relieve the deformity within three or four days if it interferes with the proper nursing of the child. Practically, I must confess, however, that by the end of the operation the milk has left the mother's breast, unless there is some other baby to maintain the flow. My preference is to wait about three months, until a full, vigorous activity of growth and cell-action is at work, and before the process of dentition has commenced. This period is selected not only for the reason mentioned, but also because the child cannot use its hands as freely as at a later period of infancy, thus avoiding risk of injury. In one patient, a year old, diphtheria appeared on the day following operation, and in his convulsions all the pins were twice torn entirely from their fastenings and the fresh wound became implicated. In spite of such complication, an excellent result was obtained by holding the parts in position for days with adhesive plaster cut in the form of a triangle sufficiently large to cover at its base the area from in front of the ear to the corner of the hyoid bone, with its apex prolonged

at the width of the upper lip to meet a similarly-shaped piece from the opposite side. These sections were united by a small elastic ring, which maintained a constant pull upon the tissues of the cheek and controlled spasmodic muscular action. In fractious children I have now abolished pins and have substituted catgut sutures for the mucous surfaces, which, if of small size and tied in three knots, will remain in position until union occurs. For the skin edges I use carbolized interrupted silk sutures, my reason for stitching the surfaces separately being that there is less linear depression of the cicatrix and less constriction of tissues is thereby exercised than by pins and figure-of-eight, while if each set penetrate half-way through the lip antero-posteriorly the sphincter is thoroughly controlled. One of the stitches should pierce the coronary arteries. To prevent any pouching of the flaps or separation of the deeper parts by oozing, horse-hair drainage for a few hours answers the best purpose. Additional control of muscles should be given by adhesive plaster prepared as above indicated, or by strips, which should not only be applied transversely, but, in order to prevent strain, should commence upon the neck on either side, in front of the sternomastoid near the cornu of the hyoid, and run thence just above the angle of the mouth across the opposite malar to the front of the ear. If these are all put in position while the surgeon pinches the cheeks well together, he will find upon releasing his grasp that the minimum of tension is exerted upon the stitches. A still better plan is to have the nurse regulate this muscular action for the first few days by pressure whenever the child cries or eats. Only by securing union by the first intention can we hope to have a narrow cicatrix: hence I do not allow the child to suck, as is the practice with some surgeons, but prefer spoon-feeding, as producing less disturbance. For the same reason, anodynes should be employed to control pain and keep the little one for a few days in a quiescent state. The child should be in the best possible condition physically, as quick union is desirable. To avoid the marginal depression so commonly seen, and which is inevitable if the simple inverted-V incision is used, I never sacrifice any portion of the paring, but, commencing the incision at the apex of

the cleft, it is stopped just before it reaches the border of the lip, thus leaving a base of supply to nourish the flap which remains on either side. These two flaps, when the parts are brought together, project downward and form a fleshy prominence, but, if stitched nicely together, will unite, and from subsequent absorption during the next year will give a slight projection. Even should this be larger than desirable, it is far preferable to the ugly notch which cannot be corrected, since a simple scissor-cut will remove all redundancy and give a nearly normal lip. The same rule in regard to utilization of tissue holds good in complicated cases of hare-lip when it becomes necessary to save as much of the alveolus as possible. Broken or cut, it can often be worked to advantage in bridging the chasm or supporting a fallen nasal septum.

If *cleft palate* coexists with hare-lip, an additional necessity for early treatment is present, since the closure of the lip will tend greatly to lessen the gap in the hard palate. Dentists realize more fully than surgeons how slight is the pressure required to act upon a tooth or upon the alveolar process; but a moment's reflection will convince any practical man that such narrowing can be accomplished, even if he has never witnessed it. In these instances, as in hare-lip and many other deformities, neglect is often as much the fault of the physician as of the family. An early operation upon the lip, strong pressure upon the maxillary bones, followed by the use of a Hainsby's compressor, will in a few years bring the cleft so closely together that a single operation will unite the edges.

These are the considerations which influence me in advising that, while the lip should be closed early, the cleft-palate operation be deferred until the plan has been tested. Few children from five to ten are tractable enough to endure the pain of a staphylorrhaphy without ether, which is desirable, and I see no particular harm in delaying the procedure until the latter period, save that the unused or mal-used muscles will require a longer period of education after closure. In a recent staphylorrhaphy upon a boy of sixteen, the letters of the alphabet could, however, all be correctly pronounced in three weeks, except the *k* and hard *c* sounds. If a good velum and uvula can be secured by

union, the hard palate can be admirably assisted by an obturator. Only last week, by preliminary touching and the use of cocaine I was able, in a child of five years, to make the parings without pain, and thus avoided anæsthesia until hemorrhage had ceased; ether being employed for stitching only.

*Tongue-tie* is a condition that exists more frequently in imagination than in reality, yet the operation for its relief need be no more than the most trifling nick of the *frænum*, the finger completing the work. If the organ can be protruded to the red border of the lip, no operation is necessary.

*Club-foot* is a deformity which is frequently neglected, not alone from the apathy of parents, but, as is shown by the cases which come under my notice, far more frequently from the incomprehensible advice of the family physician, who has counselled that "nothing shall be done for the present." Weeks slip away into months, and months into years, during which time one set of muscular fibres and one set of ligaments have become elongated, while the opposite ones are atrophied, condensed, and shortened. Bones, too, have become distorted and wedge-shaped, and the difficulties have of course increased fourfold with each advancing year. I have never been able to comprehend any reason why delay should be countenanced a single day after birth, since manipulation and subsequent fixation can easily be accomplished at the first dressing of the child. I know of no words sufficiently strong to characterize such neglect of duty as is seen in numerous instances. Twice in the last three days have I had this matter brought before me by parents who have come to the office, and who have given as the reason of their inaction that the physician had directed them to wait. Even before the age for walking great condensation of tissue will take place, and increase of deformity will occur from simple pressure of clothing, but as soon as the weight of the body is brought to bear upon these misshapen members the change will be rapid. The secret of cure of club-foot lies not in operation, but in careful attention to all the means of relief. At the first hour of birth, as I have said, manipulation should be commenced by bringing the foot from the abnormal into a normal position, or as



near it as possible, and confining it there by wood, felt, binders' board, or leather splints, rightly adapted. At the next visit, leather, gutta-percha, or, preferably, printers' blanket cinctures, should be laced upon the foot and leg, and connected by an elastic strap. The two-ply printers' blanket, with its rubber face, does not slip even when applied with only moderate tightness, thus being superior to other materials. Hook-eyelets are easily inserted by any shoemaker, and the lacing need not impede circulation. Manipulation can be practised twenty times a day without taking off the apparatus, while removal at night gives opportunities for massage, frictions, etc. If co-operation of parents is wanting, plaster of Paris can be employed with excellent advantage for fixation, a gain being effected with each month's renewal of the dressing. Leather, felt, sheet-lead, and silicate of soda are of use, but do not permit removal for manipulation, and are therefore inferior to the bands already mentioned. Those bands, which permit of constant elastic traction day and night, are very inexpensive, if remnants are bought. Their use puts the successful early treatment of any case of talipes in the hands of the ordinary practitioner for the first few months of life. In cases which are of a severe type a subsequent operation is usually necessary, but the manipulation which has been practised up to the time for tenotomy stretches condensed tissues and increases nutrition, so that relapse after division of the tendons will not occur if the same measures be continued subsequently. Failure after tenotomy is nearly always due to the neglect of manipulation. The special form of apparatus is far less important than a strict attention to details. The chief advantage of the shoe which I employ lies in the fact that it permits manipulation and stretching without removal, owing to its flexible sole-shank of upper leather, which acts as perfectly as a ball-and-socket joint, the force being exerted by an elastic strap operating upon the foot through a catgut cord passing through the eye attached to the upright. The eye-bearing arm is ordinarily constructed with too little of an outward bend. If I can control the patient, I rarely operate until I have the tissues thoroughly stretched; but if the foot cannot be placed upon its plantar surface at eight or nine months,—that is, when the age of walking

arrives,—tenotomy should be delayed no longer, since each step will increase the deformity. In operating, I divide every tissue that interferes with perfect straightening, whether it be tendinous or fascial. The tendon of the posterior tibial is an exceedingly difficult one to sever in a fat infant with poorly-developed heel. The puncture should be made just below the malleolus, and, having placed the back of the tenotome towards the artery, division can be safely made. Tenotomes, as found in the shops, have too long a cutting-surface for infantile work, as the sharp edge will frequently enlarge the external wound unnecessarily. It is my practice to leave the tendo Achillis until the end of the operation, in order to gain its fixation lower in the leverage required for stretching the parts into position,—a procedure which is best accomplished at the time of operation. The amount of power which should be employed in this process is governed by the degree of resistance and the caution of the surgeon, especial care being taken that the force be expended only on the resistant tissues. In the class of cases with which this paper deals,—namely, young infants,—it is scarcely possible that tarsectomy could be called for, although an English surgeon has thus operated upon a sixteen-months-old babe. I now use the gypsum-dressing entirely after tenotomy, since it is not only less expensive, but chiefly because it holds the foot and heel in much better position than is possible by other apparatus, and is less liable to produce sloughing, since the pressure is exerted over the entire surface. The instances where plaster produces a slough are always due to faulty application, mainly caused by some indentation produced during the setting process. If the bandages are smoothly and rapidly applied (salt having been added to the water in which they are immersed), the surgeon can, by grasping the knee, hold it steadily in place, while with the palm of his other hand placed against the plantar surface of the child's foot, complete rectification can be maintained until the plaster hardens, without danger of depressing any region of the cast. A dossil of curled hair or cotton placed over the ball of the great toe and the prominence of the cuboid or astragalus, and confined in position by the flannel bandage enveloping the foot, will also assist in averting any harmful pressure.

I cannot too strongly emphasize my appreciation of plaster of Paris in the treatment of *fractures* in infants, giving, as it does, a perfectly-adaptable material, and yet, when hardened, securing an immobility of the injured part that permits free handling, provided the articulation both above and below the injury be included in the dressing. This is feasible even in fractures near the hip, since the splint can be made to encircle the thorax, and thus prevent the great motion that is always present if only the pelvis be fixed. No risk of injurious swelling need be feared, if a flannel bandage or a thin layer of cotton is first applied to the limb. It is better to saw open a dressing at the end of two weeks, and either tighten it or apply a new one. Silicate and other rigid dressings harden so slowly that displacement may occur during the process. The fractures occurring during birth are often overlooked for several days, and the fact that the child moves a particular portion of its body freely is not proof that lesion of bone has not occurred. I have seen several instances of fractured clavicle in which the child indulged in most vigorous movements of the arm. These collar-bone breaks are quite common, either from falling out of bed or from careless handling, or from the playful jerking of other children. The under-waist of an older child placed in proper position over the well arm, and pinned tightly around the body so as to include the injured member, often keeps in place better in fat babies than a Velpeau bandage, especially if the hand is secured with a loop. Bored cotton should be placed in the axilla.

*Green-stick fractures* are best treated by etherizing the child and slowly straightening the bone by hand-pressure. Even should complete solution occur, the result will be good. A slight curve can be reduced by splint and bandage. Separation of epiphyses are practically fractures, and should be treated as such.

Dislocations do not differ from similar injuries in adults, save that they are even more readily replaced by manipulation.

The resultant deformities of *infantile paralysis* are numerous, and are frequently passed over by both physician and parents, under the erroneous impression that nothing can be done for the relief of these poor, weakened members. Recognizing that resto-

ration is best accomplished by massage, electricity, etc., and particularly by action, it is my rule never to assist a muscle if it is capable of permitting locomotion, or unless deformity is being produced by non-support. The following are considerations that determine the necessity for apparatus. If a bone is bending, or an articular surface becoming distorted, or a ligament yielding, or muscles becoming atrophied from excessive stretching, or if by applying a support the child can be made to walk, then I always order an apparatus which shall not take the place of the enfeebled muscles or put them in splints, at rest, but which shall render just enough assistance to enable them by hard contraction to accomplish the desired purpose. If rigid steel is used, they will soon relinquish their attempts at assertion of power, and enfeeblement will increase. By a judicious adaptation of mechanical appliances, many who are now condemned to chairs and beds can be placed upon their feet. The advisability of tenotomy will depend upon the benefit to be gained by such a procedure. In many cases it will assist greatly in placing limbs in proper position for locomotion, and for this reason its mechanical effect should be thoroughly studied. My observation leads me to believe that it is employed too seldom. The excision and shortening of tendons by suturing is often of advantage. Any irregularity in the length of limbs should be counteracted, lest lateral curvature result.

*Nævi*, if situated upon exposed portions of the body, must be cured early in life if rapidly increasing in size, and in the majority of cases should be attended to before six months is reached. The question of excision, ligature, subcutaneous ligature, injection, electrolysis, or sun-heat, will depend upon situation, size, etc.

*Webbed fingers* and supernumerary toes and fingers will yield smaller resultant scars if operated on during the first half-year of life.

*Wry-neck* may follow injury to the spinal accessory nerve during labor, or it may be found as a result of some of the exanthemata. If resistant to local and constitutional remedies, myotomy should be performed at the end of a year.

*Spinal caries* in young children can be retarded by placing the sufferer upon its back between two sand-bags, while passive

motion is employed to develop muscular power. A jacket or cuirass may be added when bone-death is rapid or if difficulty of retention be experienced. Horizontal extension is rarely necessary. I have occasionally seen *lateral curvature* in weak infants caused by the mother's habit of always holding them in one position, the reversal of which custom has, together with constitutional remedies, completed a cure. It may also be the result of a rachitic tendency, which will necessitate the appropriate medicinal and hygienic management. Simple posterior curvature and also lordosis are sometimes found, and should be closely watched, as other symptoms of that disease of malnutrition, rickets, may soon present themselves. Dorsal decubitus should be maintained until the proper treatment has had time to strengthen the child. *Rickets*, fortunately, is seen upon this side of the Atlantic far less frequently than on the Eastern shores, and, I am thankful to say, is seldom found in Philadelphia even as compared with New York. In fifty thousand cases in our hospitals, I find that less than fifty are enumerated under rickets and its results, including knock-knee, bow-legs, etc. Its onset is usually within the first six months of life, but unfortunately many cases are not brought to the notice of the surgeon until one or two years have elapsed and great deformity has already resulted. When pronounced, the most rigid care should be taken to prevent the distortions from which no bone in the body seems exempt. The effects upon the female pelvis are most disastrous, and life is thereby endangered. The recumbent position is the only safe one, and must be maintained until the general remedies have time to act, passive motion meanwhile taking the place of active. The tibial curves are the most common defects. Very slight bowing is sometimes corrected in the growth of the individual, but we have no more right to expect that such a result will spontaneously occur than that a crooked tree shall be blown into the upright position by chance winds. The proper means should always be used to compel rectification. If the bones are spongy, then much can be expected from manipulation, pressure, and apparatus properly constructed. During the first two years of life we may confidently hope to accomplish a good result by such means, but in later childhood or

adult life, if the deflections are great, the bones rigid, and especially if the curve be anterior, but little can be gained by these means, and osteotomy is the more certain and speedy means of relief. The risks of this operation, if done antiseptically, are but very slight, as the case, if sealed, becomes one of simple fracture. Plaster of Paris again gives us the best fixation after operation, and is very comfortable to the patient.

I approve of instruments in lateral bow-legs, but when they fail to secure straight limbs in the class of cases above mentioned, I firmly advocate operation. To permit the deformity to continue is not only unsightly, but also interferes greatly with the locomotive powers. It is not true that a bow-legged man is strong. He has, on the contrary, to use his limbs at a disadvantage, and if he be vigorous it is in spite of his complaint.

The question of *tracheotomy* in young infants, with whom our present discussion chiefly deals, is one demanding the gravest consideration, whether the dyspnoea originates from diphtheria or from true croup. So fatal are the results, that the mortality in babes below the age of six months is placed by some writers as high as ninety-five per cent.; and, even taking all cases under two years, we cannot expect to save more than from ten to fifteen per cent. When we consider, however, that some English writers place the mortality of croup without operation at ninety per cent., we at least cannot believe that the operation has increased the number of deaths. Moreover, when cases are taken at the most favorable age and under the most favorable conditions, we can scarcely hope to save more than twenty-five per cent. of all cases operated on. I have spoken thus in regard to prognosis, since some surgeons absolutely condemn the employment of tracheotomy for these young cases. I cannot feel, however, that they are absolutely hopeless, and if surgery can relieve them from the horrid death by suffocation we should not hesitate to give them the aid of science, although a true tracheotomy is wellnigh impossible in a young, fat infant, owing to the exceeding shortness of the trachea and the great size of the thyroid body. It is usually best to do an inferior laryngotomy (or crico-thyro-laryngotomy), making the opening through the crico-thyroid membrane, and also through the



cricoid if necessary. The risk of hemorrhage is thereby greatly diminished, since while the crico-thyroid arteries may be cut, they will be far less troublesome to secure than will the vessels about the thyroid body or the middle thyroid artery, which often lies in front of the trachea. Again, the innominate artery may rise high in the neck, or a wound of a vein near the innominate may speedily kill the little one, as has happened in a number of instances even when the operator has been experienced. The fact that surgeons who have opened the windpipe several hundred times look upon this operation as an exceedingly difficult one, is proof that the utmost care is necessary. The danger of wandering from the median line may be partially obviated by having the child's head kept perfectly straight and by placing the body in an exact line with the table. The trachea is sometimes missed because it has not been thoroughly cleared of everything before attempting to open it. The puncture should be made firmly but guardedly. The size of an infant's trachea will surprise one who has never studied it. Although I had given large and special study to the anatomy of childhood, both from the cadaver and clinically, my first tracheotomy case died on the table before I could insert the tube, my error being in trying to push the canula too far back. Unless the urgency is great, ether should be given in moderate amount and the operation carefully performed. A plunge into the trachea is never good surgery; in infants it would be worse than folly. If a circular piece is taken from the crico-thyroid membrane and cricoid, and a pilot used, introduction will be rendered more easy. In fat necks, the windpipe may be brought nearer the surface by extending the head far backward and by grasping the tube on either side and dragging it forward. If fixed thus in the median line, and retained continuously by an assistant, much time will be gained. In a recent case I found it wiser to go above a large thyroid body, even in a five-years-old child, and insert the canula in the crico-thyroid space. There was afterwards a slight burying of the upper edge of the plate, owing to its high position, but a strip of sheet-lead obviated this difficulty. To arrest the venous hemorrhage, just before puncture, hot-water sponges answer admirably. After operation the temperature

of the room should be kept above 80°. I have never opened the larynx to remove a foreign body in a very young child, but the universal habit of making the mouth the general receptacle of everything makes the introduction of such substances exceedingly probable at from one to two years.

*Foreign bodies* in the nose which cannot be seized, and which are not removed by sternutatories, should be always sought for with the aid of anæsthetics.

In the ear the opposite mode holds good, since consciousness of pain will often prevent an unskilled practitioner from doing great injury to the membrana tympani.

*Joint-diseases* are best treated recumbently, with fixation or extension.

*Excisions* are rarely performed at this early age, and need not, therefore, be discussed.

I omit strumous and syphilitic diseases, and a score of other conditions which might well detain us for hours, since time forbids.

I have thus, gentlemen, hastily touched upon only the more frequent of the surgical maladies met with in daily practice among infants. Many of the suggestions may be already familiar to you, but even the brief mention which I have been allowed to bestow upon each subject may possibly have served to revive in your minds old and forgotten experiences, and thus be helpful. You will at least see that the field is a wide one, and that results are most encouraging.

1878 CHESTNUT STREET.

## ORIGINAL COMMUNICATIONS.

### REPORT ON OPHTHALMOLOGY.

BY ALBERT G. HEYL, M.D.,

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#### THE PROPHYLAXIS OF BLENNORRHOEA OF THE NEW-BORN CHILD.

UFFELMANN gives the following facts in connection with the subject. Statistics from a number of European hospitals and foundling-institutions show that an average of about thirteen per cent. of the newly-born children are attacked with blennorrhœa when no prophylactic treatment is employed. In connection with this, it is interesting to know that of two hundred children born in the grand-

duchy of Mecklenburg-Schwerin in private homes during the year 1882, only one was attacked with blennorrhœa. This is only one-half per cent., and of course points to the comparatively greater frequency of the disease in hospitals, etc. Another interesting point in this connection is in respect to the percentage of persons blinded by blennorrhœa. Horner's statistics showed that about 33 per cent. of the blind in the various institutions of Germany and Austria had lost their sight through this disease; Dumas's statistics showed that, out of 1078 cases, 69 per cent. were due to blennorrhœa; while Magnus, in compiling his statistics, found at first 34 per cent., but, on considering a much larger number of cases, 13.25 per cent. These statistics of course have to do with the hopelessly blind, and not with cases which have lost one eye or have been partially blinded by this disease.

The prophylactic treatment of Cr  d   is as follows. Immediately after tying the cord, the child is placed in a bath, and while in it the eyelids are carefully washed with fresh water (not the bath-water), an absolutely clean piece of linen being used. The child is taken out of the bath, and before dressing it each eye is opened and a two-per-cent. solution of nitrate of silver dropped in. This is not repeated. The effect of this has been practically to abolish the disease in the institutions where it has been tried. Cr  d   declares that the treatment has no ill effects; only in a few cases of premature birth was the conjunctiva irritated by it. Others have seen this also in children who have gone to full term.—*Centralblatt f  r Prakt. Augenheilk.*, April, 1885.

NEURO-RETINITIS, WITH RAPID LOSS OF SIGHT.

Knapp reports the following cases:

*Case I.*—A gentleman,   t. 40,—strong, healthy, temperate, without constitutional disorder,—was seized with intense headache and nausea. On the evening of the same day the sight became dim. He slept well during the night, but the next morning was totally blind. On the afternoon of the same day Knapp found him free from pain and fever, sensorium undisturbed, appetite good, general condition excellent. He had passed no water during the whole day. The bladder seemed empty on percussion. Fifteen grammes of urine were drawn off by the catheter.

The external appearances of the eyes were normal. Pupils widely dilated and irresponsive to incident light. No perception of light existed. Mobility and tension normal, media clear. Anterior chambers of ordinary depth. Well-marked appearance of choked disk in each eye, the retinal veins rather large and tortuous, the arteries small, not pulsating on pressure on the globe. No hemorrhages, no white patches in the fundus. The tests for albumen and sugar were negative. Salicylate of soda was ordered until profuse diaphoresis was induced. The next day the urine had still to be withdrawn by catheter: the amount secured was about thirty grammes, free from casts, albumen, and sugar. No change as regards sight. Diaphoresis repeated, with dry cups to the temples. The day following, the patient passed more urine. The condition of the eyes was unchanged, except that the retinal arteries were rather more filled. Dr. Draper, who was called in consultation, could detect no abnormality in the heart or other organs of the body. On the fifth day of the attack the patient was a little somnolent, but passed more urine. The changes which occurred for the next fifty days were mainly the following. The retinal arteries, which had not pulsated on pressure on the ball at first, did so readily; the optic disk became pale and flat, as if atrophic; the retinal veins became of normal size; pupils continued widely dilated; the blindness was absolute. There was some tingling and numbness in the left hand and leg. Ten months after the onset there was noted slight return of sight in the R. E. Otherwise there was no apparent mental or bodily failure. The treatment consisted of strychnia, electricity, generous diet, large doses of potassium iodide, mercurials to repeated salivation, and blisters behind the ears.

*Case II.*—Caroline L.,   t. 11½ years, in good general health, never suffered from severe disease. For five or six days had suffered with temporary obscuration of sight. Two days before she was seen by Knapp, at times in the forenoon it seemed as dark as night to her; at 3 P.M. the L. E. had become blind. The sight of the R. E. gradually failed, and by noon of the next day had entirely vanished. Examination on the following day revealed the following: Both pupils of medium size, immovable; sight = 0 in each; me-

dia clear; both disks swollen; arteries small; veins large, dark, easily emptied by external pressure, which caused the disk-portions of the central artery to pulsate; outward appearance, tension, mobility, sensibility of the eye normal; urine normal in quantity, specific gravity, and chemical composition; no morbid symptom of the brain or any other organ. She was placed on salicylate of soda and calomel. Profuse perspiration and excessive diarrhœa were induced. The diaphoresis was repeated. Calomel discontinued for several days, then repeated so as to induce one or more stools a day. Under this treatment the sight returned completely in about a month, and when last seen, two months later, was perfectly retained. At this time, apart from the atrophic appearance of the disk, nothing abnormal could be detected in either eye.—*Rep. Amer. Ophth. Soc.*, 1884.

[These two cases seem to be essentially different. The striking point of difference is in the quantity of urine secreted. In the first case it was abnormally small, in the second normal. This indicates perhaps in the first case simply an abnormal state of the general arterial tension which so disturbed the retinal circulation as to induce the ophthalmoscopic changes, etc. In other words, the so-called neuro-retinitis of this case was simply a form of suddenly-induced disturbance of the retinal circulation accompanied by profuse escape of lymph. In the second case there possibly was a somewhat similar condition of the retinal circulation, but more local in its origin. The practical bearing on the treatment of the cases may be thus stated. The successful result in the second case was due largely, if not altogether, to the purgative action of the calomel. The abdominal vessels were acted on, the arterial tension in the carotids and their branches altered, and the circulatory disturbance in the retina restored.

The condition in the first case seems to have been different. From the well-established relation between the arterial tension in the aorta and the flow of urine, it may be surmised that the tension in the abdominal aorta at least was lowered, and that the circulatory disturbance in the retina was attributable to it. The cause of the lowered tension was of course obscure, as was also the proper method of treatment. The method of action on the skin was fairly

tried and failed. The reviewer's experience is that this method is rather adapted to inflammatory condition of the uveal tract than the morbid condition at present under discussion. It must be confessed that the treatment of a case of this kind presents great difficulty, but the above *rationale* gives at least a clue: medication with a view to increasing the flow of urine might be tried, and digitalis given tentatively while the condition of the retinal vessels is carefully watched suggests itself as the one to be tried first.—H.]

#### ATROPHY OF THE OPTIC NERVE IN MYXEDEMA.

Dr. O. F. Wadsworth reports the following case. The symptoms of myxedema had first appeared five and one-half years before the eyesight began to fail; the latter had gradually progressed for one and a half years. At this time the face was full, heavy, of waxen hue, the natural folds obliterated; the hands and feet enlarged; the skin not dry to touch; thyroid of normal size; heart, lungs, temperature, pulse, normal; urine normal in every respect; conjunctiva, cornea, iris in each eye, normal; movements of eyeballs good; R. E. V., only light-perception; L. E. V.,  $\frac{2}{10}$ ; field contracted in all directions; media clear. In both eyes the disks were sharply defined, bluish-gray; central vessels, both arteries and veins, small.—*Rep. Amer. Ophth. Soc.*, 1884.

#### IRITIS SEROSA OF SYPHILITIC ORIGIN.

Dr. Alexander, of Nachen, reports the following case. This patient was infected with syphilis in 1882. Upon the first indications of general infection,—roseola, sore throat, loss of hair,—the patient was placed upon mercury and potassium iodide for a long time. He was apparently freed from the disease, but in one and a half years from the time of infection he was attacked with a recurring inflammation of both eyes. Six months after the commencement of the eye-disease, the following was noted. R. E. Tension normal, conjunctiva not injected, aqueous humor cloudy; punctate deposit on the Descemet; pupil not adherent, and easily dilated with atropia. L. E. Only a few punctate deposits on the Descemet. There was then a serous iritis in one eye, and evidence of its previous existence in the other. Under treatment the symptoms subsided, then



recurred. Sometimes the right, then the left eye would be affected. The patient was subjected to inunction, during which an eruption of varicella syphilitica appeared, subsided in eight days, and returned again. The author refers to the coexistence of serous iritis and syphilitic diathesis as being very rare, having, in an experience with many thousand syphilitic cases, never observed this form of eye-disease before.—*Centralblatt für Augenheilk.*, April, 1885.

#### ABSCESS OF EYEBALL AFTER MENINGITIS.

Dr. Meeks reports the following case. A child, æt. 13, was attacked with scarlatina and confined to bed for three weeks. Subsequently otorrhœa manifested itself. After this, six weeks from the commencement of the scarlatina, symptoms of violent meningitis occurred, with marked typhoid symptoms. Three weeks later the R. E. became inflamed and the sight was lost. Thirteen weeks from the inception of the scarlatina, the condition of the eye was this: shrunken eyeball, clear cornea, iris bound down by adhesions, lens tolerably clear, vitreous infiltrated. An abscess existed between conjunctiva and sclera below. The eyeball was enucleated. The contents of the abscess were of cheesy consistence, and the cavity of the abscess communicated, by an opening three millimetres in diameter near the equator of the ball, with a space between the retina and choroid. The retina was separated totally from the choroid, the space between the two being mainly filled with a sero-purulent fluid. The optic nerve was in a state of atrophy.—*Centralblatt für Augenheilk.*, May, 1885. [The clinical history points to septic infection from the purulent ear-disease. The blood-vessels of the choroid do not seem to have been examined for micro-organisms. Probably, from what is known of septic eye-infection, arteries in the choroid existed occluded by septic material, hence the serous transudation between retina and choroid, the iridocyclitis, and the abscess.—H.]

#### CONTRIBUTION TO THE PATHOLOGICAL ANATOMY OF GLAUCOMA.

Binnbacher and Czermak report the following results of a series of microscopic examinations made upon eyeballs in which primary glaucoma of the chronic inflammatory form had existed. In all cases the uveal and scleral tract showed marked changes, the result of existing or pre-

existing inflammation. The most important fact noted was that the inflammation had extended along the veins, especially the vortex branches. In the vessel-wall and in the perivascular space, in some cases, a young granulation-tissue was noted; in others, a firm cicatricial tissue. Moreover, the endothelium of the vein was observed to have proliferated, forming masses partially obliterating the lumen. Marks of inflammation were also observed about the veins of Schlemm's canal and the anterior ciliary veins. The authors consider this condition to be a periphlebitis chronica hyperplastica, with concentric endophlebitis. They do not attempt to base a general glaucoma theory upon this pathological condition, but suggest that at least in certain cases the above-named periphlebitis arises. Circulatory disturbance within the eye arises, giving rise to the peculiar group of symptoms known as glaucoma. The term glaucoma is essentially clinical, and is the expression of a circulatory disturbance called forth by certain anatomical changes which cannot be compensated for by the organism.—*Graefe's Archiv*, 1 Abth., 1885.

#### A NEW INSTRUMENT FOR THE TREATMENT OF STRICTURE OF THE DUCT.

Prof. Tantufieri uses an instrument shaped like a Daviel spoon, with an olive-shaped probe-point. The spoon portion of the instrument is made to act like a file, so as to remove hardened tissue. Where cocaine is first injected into the canal the operation is painless. The results of treatment are said to be satisfactory.—*Centralblatt f. Augenheilk.*, May, 1885.

#### THE FIELITZ READING-MACHINE.

This is an apparatus intended for children who are learning to spell. It consists of a frame on which letters can be placed and arranged in any desired combination. The object is to prevent or break up the injurious habit of bending over the letters when a primer is used, while at the same time it allows of class-instruction, and thus overcomes difficulties which exist where, especially in large classes, each child has its own book.—*Klinische Monatsblätter*, May, 1885.

#### A NEW PERIMETER.

Dr. Dyer describes a new instrument for taking the field of vision. It is a combination of the bow-perimeter of Förster and the hemisphere of Scherk. The

hemisphere is made of a spiral of strong brass wire, starting at the fixation-point and running spirally around this centre until a hemisphere is formed. By a suitable attachment, the eccentric object is moved on the spiral from centre to circumference. A field can be taken in about two minutes. When desirable, a small electric lamp can be attached to the carrier, and thus the field tested for its light-perception.—*Rep. Amer. Ophth. Society, 1884.*

## NOTES OF HOSPITAL PRACTICE.

### PHILADELPHIA HOSPITAL.

CLINIC OF J. M. KEATING, M.D.,

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#### REMARKS ON THE TREATMENT OF WHOOPING-COUGH.

I HAVE recently been able to study, with more than ordinary care, four very marked cases of whooping-cough, and the results of treatment have been so interesting to me that I think the matter of sufficient importance to make it the subject of my remarks this morning. I may premise, whilst on this subject, by saying that I have been frequently asked what is the length of the period of incubation of this disease. This is a difficult matter to determine. Nevertheless, I think we can place it at from twelve to sixteen days; usually, two weeks. In the cases above mentioned, three children were exposed once: a playmate, with the disease then unrecognized and supposed to be a bad bronchitis, spent the afternoon with them, playing in a warm nursery.

The period of incubation in these cases was two weeks, and it could be calculated to a certainty, as they were exposed only once.

The children had had the disease about three weeks when I saw them. Their ages ranged from  $6\frac{1}{2}$  to 2. They had from eight to ten very marked paroxysms daily. The nights were disturbed by frequent coughing, and there was the usual distressing vomiting after each meal.

The plan of treatment adopted was the following, and at the end of a week the cough had almost ceased in the eldest and youngest. The second child, aged 4 years, had had one or two slight paroxysms at night, but these soon ceased also.

The remarkable improvement could only be explained as the result of treatment; and especially was this noticeable from the fact that after they had been free from the cough entirely for fully three weeks the spray was omitted (the rest of the treatment having been stopped at least ten days before), they were sent to the sea-shore, and at once the paroxysms returned in all three cases with considerable severity. I think this point interesting, as it shows that the treatment merely held the disease in abeyance, as it were, and did not cure it, and that change of air either produced a catarrh which aggravated the whooping-cough or irritated the mucous membrane. To my mind, this is an evidence that we have in this disease a cause which acts on the central nervous system directly, and requiring a peripheral irritation either in the pharynx or larynx to produce the paroxysms. Certainly, if the disease-germs resided alone in the pharyngeal or laryngeal mucous membrane, a line of treatment that would so effectually act as to destroy them for a period of three weeks would be followed by more marked evidences of permanent improvement. A change of air and cessation of local applications might be followed by a gradual relapse, but in these cases the paroxysms returned with an intensity that could only be accounted for by the fact that the central nervous system was at all times affected by a poison which, from the fact that there was a noted period of incubation, was carried to it in the circulation, and that the local treatment diminished the tendency to local irritation in the throat.

In these cases I used, four or six times daily, the spray of the following:

R Ammon. bromid.,  
Potass. bromid.,  $\text{āā } 3j$ ;  
Tinct. belladonnæ,  $f3j$ ;  
Glycerinæ,  $f3j$ ;  
Aquæ rosæ, q. s. ad  $f3iv$ . M.

Ft. sol.

A tablespoonful of this was taken with the same amount of "Listerine" and used with Snowden's atomizer, No. 2. It is by no means an easy matter to use the spray successfully with children, and as, in my opinion, the success or failure of the treatment depends so largely on this, the *modus operandi* should be thoroughly understood.

I do not use a tongue-depressor, as I find that its presence will cause gagging in most cases. The child should open the

mouth wide, as wide as possible, and then be told to breathe as deeply and rapidly as it can. This rapid breathing will not only carry the vapor into the larynx, but will also divert the child's mind and prevent that reflex spasm of the arches of the pharynx which is so likely to occur. The spray should be continued, if possible, for a minute, then the child should have a rest, and again attack it, and so on for at least six or eight applications. The spray should be used before meals and just before going to bed. As regards the solution, although the above has answered most satisfactorily in my hands, I would vary it according to circumstances.

If the secretion be very scanty and tenacious, it would be necessary to use possibly the ammonium chloride instead of the bromides, with from four to six grains of acid. carbol. (cryst.) to the f $\bar{z}$ iv. If the secretion be too profuse, the belladonna could be increased or alum added to the solution. I consider "Listerine" an excellent solution, and I add glycerin owing to its water-absorbing properties and to its adhesiveness. To use the spray with good results it must be thoroughly and frequently used, and also kept up for some days, even weeks, after the paroxysms have diminished or ceased.

In the cases above mentioned I also gave the following to bring about a good night's rest:

R Potass. bromid., 3j;  
Chloral hydrat., gr. xxiv;  
Cibil's ext. carnis, f $\bar{z}$ ijj. M.

(Any reliable fluid meat extract can be used.)

Dessertspoonful in water at bedtime.

I find that children will relish a cup of beef-tea at night in this way. It is strengthening for them, and disguises admirably the salty pungency of the medicine which it conceals. They also took

R Quiniæ sulph., gr. j;  
Syr. yerbæ santæ, 3j. M.

Three times daily.

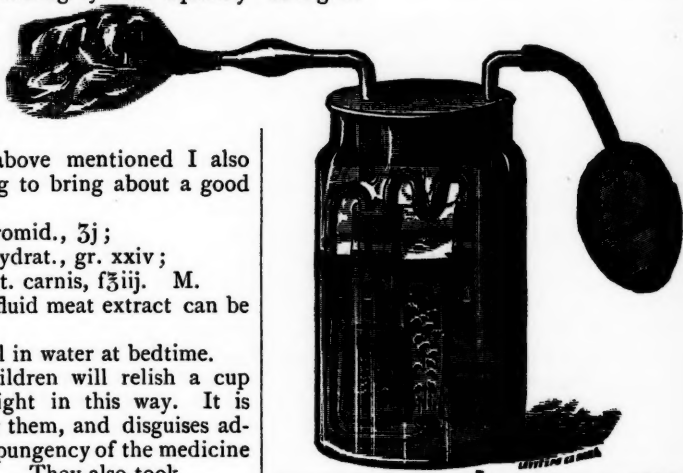
The syrup of yerba santa, used to disguise quinine, should be made *without the resin*. When made in that way I find it an excellent vehicle.

The greatest difficulty is in the treatment of infants under one year with this disease. The use of the atomizer is of

course very difficult, and it becomes necessary to substitute something for it.\* Belladonna I find stands at the head of the list. I give it in two-drop doses of the tincture three times daily for a child a year old, explaining to the mother exactly what is expected of it. If the night paroxysms are very severe, three drops can be given at night with the mixture of potass. bromid., gr. ij; chloral, gr. ij; or a teaspoonful of lac asafœtida.

The symptoms of belladonna-poisoning are, as I have had occasion to note, dilated pupil, intense scarlatinous rash, and slowing of the respirations; indeed, the latter may be very alarming. On this account I prefer to give the belladonna separately from any mixture, so that its dose may be regulated. In some cases it can be pushed until the pupils begin to dilate, in others the dose tolerated will be small. I prefer the tincture of belladonna to atropia, as I believe it a safer preparation to put into the mother's hands.

The following mixture I have found excellent in some cases where the paroxysms are very violent and frequent, especially at night:



\* The accompanying cut represents an arrangement which Mr. Genois, of John Wyeth & Brother, has kindly had made for me, by means of which the vapor of bromide of ammonium can be readily generated. The bromine in stated quantity is placed in water in one of the small vials, aqua ammonia diluted to a certain degree in the other. These are connected by glass tubes, and both are immersed in a larger vial containing water which is slightly carbolicized or made aromatic. The vapor of bromide of ammonium, generated in vial No. 2, is passed through this washing solution. Thymol could be added to this washing solution, I believe, with advantage. I think that the vapor of ammonium bromide, when medicated as above, will be of more universal use than the spray, and will not only be valuable for all forms of cough, but also useful as a direct application to the throat in various affections.



R Tinct. belladonnæ, gtt. viij;  
 Vini ipecac., ℥xx;  
 Spts. ætheris nitrosi, ℥xx;  
 Aquæ, q. s. ad ʒj. M.

A teaspoonful in an equal amount of water, with a little sugar, and repeated in one hour if required.

If the paroxysms are severe during the day, the secretion tenacious, and expectoration difficult, the following will often do well, with a dose of chloral at night:

R Ammon. carb., gr. viij;  
 Syr. scillæ comp., ℥xx.  
*Neutralize*, and add  
 Syr. toltan., fʒss.

Aq. aurant. flor., q. s. ad fʒj. M.  
 Dessertspoonful three or four times daily.

As the child constantly craves water, and if allowed to wait to satisfy its thirst for the time of nursing its eagerness will bring on a paroxysm, it is well to give it frequently a drink of sugared water with a pinch of bicarbonate of sodium.

I have had an excellent opportunity of testing the value of vaccination in whooping-cough. It failed utterly; in fact, only added its own annoyances to those of the disease.

### TRANSLATIONS.

ENTERITIS FROM ABSORPTION OF CORROSIVE SUBLIMATE USED IN DRESSING WOUNDS.—To the four deaths from mercurial intoxication reported by Drs. Stadfelt, Bokelmann, Stenger, and Maurer, Dr. Frankel (*Virchow's Archiv*, Bd. xcix. p. 276) adds fourteen cases of mercurial poisoning which occurred in the surgical department of the Hamburger Allgemeinen Krankenhaus, in which an extensive diphtheritic-like inflammation was prevailing at the time.

These are the first cases of this kind reported in the domain of surgery, the hitherto-published observations having all occurred in gynæcological practice.

These fourteen cases occurred within two and a half years, seven times in phlegmon with pseudo-erysipelas and ulcers of leg; twice in caries of the vertebra with burrowing abscesses; once in amputation of the thigh for senile gangrene; once in removal of a carcinomatous breast; once in myotomy; once in a laparotomy with removal of the uterus and right ovary for fibroid tumor; and once in an operation for the removal of a suprahepatic echinococcus cyst. All the patients were anæmic, run-

down individuals, some of whom had fatty hearts. In all cases a large surface of the body or the interior of large wounds were in contact with the sublimate solution.

The most prominent symptom was diarrhœa, the stools being frequently mixed with mucus and blood. Salivation and stomatitis were not observed. It caused death in two cases (the breast-amputation and in a case of multiple gangrene of the skin of body and lower extremities). In the other cases the mercurial poison was complicated with dangerous symptoms from other causes.

The anatomical lesion of the enteritis was manifested by a necrosis of the mucous membrane from inflammation extending along the bowel. It was usually limited to the large bowel: the small intestine was only occasionally affected, and never unless there was also decided disease of the large intestine. In the worst cases the appearance of the gut resembled that found in a bad case of ordinary dysentery; the surrounding mucous membrane was infiltrated and reddened, sometimes swollen even to rigidity, and covered with extravasations. Changes in the other organs were not found.

Dr. Frankel concludes, from the clinical picture and from the absence of other post-mortem changes, that these appearances were due to mercurial poisoning, and not to diphtheria or beginning sepsis. He, in conclusion, cautions the profession against the use of mercurial dressings in run-down individuals, and also in very fat people, and especially those with fatty heart. He advises the use of this valuable antiseptic only in the weakest solutions, and cautions against too freely inundating the wound.

HERPES ZOSTER TREATED BY SALICYLATE OF SODIUM.—Dr. Dubousquet-Laborde communicated to the Clinical Society recently the results of the treatment of zona by sodium salicylate with marked and speedy relief to the neuralgia. One case was a boy, 15 years old, who had been treated for acute rheumatism two months before. Acting upon this suggestion, he was given twenty grains of the sodium salicylate every four hours, and in twenty-four hours he was entirely free from pain, which did not return, although the herpes pursued its usual course. Two other cases (of adults) were treated in the same way, with prompt relief from the neuralgia.—*La France Médicale*, No. 74.

PHILADELPHIA  
MEDICAL TIMES.

PHILADELPHIA, JULY 25, 1885.

EDITORIAL.

EXIT PERONOSPORA FERRANI.

FROM the figures given in the letter of our Paris correspondent, which probably include only a comparatively small part of the whole number, it will be seen to what an extent the rage for the so-called protective inoculation has been carried in the cholera-infected districts in Spain, and what a thriving and profitable business has been carried on by Dr. Ferran. The French commission, which went out to investigate this alleged discovery of the prevention of cholera by inoculation, have returned with the intelligence that Dr. Ferran is performing his inoculations in order to make money, and intends to keep his method a secret until he is "properly compensated" for his discovery. Inasmuch as, by his own showing, a considerable portion of those "protected" by his process afterwards are attacked by the cholera, and, in spite of the protection, not a few die with the disease, it does seem that Dr. Ferran and his discovery do not deserve much consideration.

Moreover, the injections themselves seem not to be so harmless as they have been represented, since a number of persons, including a physician, have died from blood-poisoning, or have recovered only after an amount of suffering to which an attack of cholera itself would be preferable.

While Dr. Ferran is engaged in the laudable purpose of acquiring wealth for his children, though by unprofessional methods, we can extend our sympathy to those physicians who recently tendered the honor of a public dinner to the great discoverer of the Peronospora.

THE PROPHYLACTIC TREATMENT  
OF BLENNORRHOEA NEONATORUM.

THE virulent conjunctivitis not infrequently seen in new-born children is a disease which has of late years excited considerable attention. Particularly is this the case in connection with the prophylactic treatment first brought prominently before the profession by Cr  d  , and since then extensively employed in various foundling-asylums and lying-in hospitals in Europe. We direct attention to some interesting statistics relating to this subject in the "Report on Ophthalmology" (p. 795), which shows the remarkable success attending the treatment. The treatment is, of course, especially applicable in institutions where new-born children are congregated, but doubtless is indicated in private practice where granular vaginitis exists at time of birth, or where the father of the child has urethritis. Another point in connection with this subject is the extreme importance of immediately and properly treating this disease when discovered. There can hardly be a doubt that many cases of blindness from this disease are the result of sheer neglect; and hence the pertinence and wisdom of the suggestion of one of the English ophthalmological societies, recently addressed to the Registrar-General, that "the following notice be printed on all official documents issued to parents in relation to birth, registration, and vaccination of children: 'If the eyelids become red and swollen, or begin to run with matter, within a few days after birth, the child is to be taken, without a day's delay, to a doctor. The disease is very dangerous, and, if not at once treated, may destroy the sight of both eyes.'"

ALUMNI ASSOCIATION PRIZE.

AT the next annual commencement of the College of Physicians and Surgeons of New York, to be held in May,

1886, a prize of five hundred dollars will be awarded by the Alumni Association for the best essay embodying the result of original research upon some medical subject. The competing essays, bearing a motto or device and accompanied by a sealed envelope bearing the same motto, containing the author's name and address, are required to be handed to the Committee before April 1, 1886.

## NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

**TREATMENT of Diphtheria.**—We give an interesting *résumé* of the treatment adopted by Dr. J. Simon at the *Hôpital des Enfants Malades*. First, as to local treatment. Dr. Simon says, "For local applications I prefer simple lemon-juice or vinegar, or even pure red claret wine. I do not see much objection to perchloride of iron, but I think that the lemon-juice is best of all. I apply it as follows. Take a clean piece of wood, and attach to it firmly a small portion of lint, saturate it with the lemon-juice, and try to detach the false membranes without pressing hard enough to make the part bleed; at the same time do not simply touch the part, but exercise only enough pressure to attempt the removal of the membrane. This should be repeated every hour during the day, and every two hours during the night. If the patient be old enough, you may order a gargle every two hours of any one of the following liquids: boric acid four-per-cent, or borax two-per-cent. solutions, or chlorate of potash four-per-cent. solution, or even vinegar. In the younger patients we should employ irrigations. For this use anything for a reservoir that will contain at least two quarts of the solution, and that you can hang high up on the wall near the bed; from this suspend the tube, and give irrigations every hour. If the little patients will not open the mouth, place the tube inside the lips on the side of the jaw, and you will be astonished to see how quickly they will open the teeth and allow the irrigation to go on when it is started. They will afterwards ask for it, so much relief do they feel from its effects.

"On the neck you may apply any fatty substance you like, in which incorporate the iodide of potassium as a resolutive. I have been in the habit of ordering a sort of cravat of wadded cotton on which is spread an ointment of belladonna and hyoscyamus. I do not approve of ice applied around the neck, fearing some pulmonary complication. For

internal treatment, give the perchloride of iron in doses of three to six drops in a little water, to be given at the moment you give some liquid aliment. Remember that this medicine will decompose when it comes in contact with metallic spoons, or milk, gum-water, etc. If the patient be over six years old, I give the following three to four times daily:

R Cubebæ, 30 centigrammes;  
Copaibæ, 60 centigrammes;  
Ferri subcarbonatis, 4 centigrammes;  
Bismuthi subnitrat, q. s. M.

"As to the chlorate of potassium, I have not been able to see any great benefit from its use. Add to this all your efforts to sustain the patient: give alcohol in any of its forms, brandy, champagne, port wine, etc.; keep the temperature of the room at about 15° or 16° C.; have the air kept fresh by opening a window in the next room. A spray of thymol or carbolic acid may be kept going, or, what is better, keep a dish boiling with such substances in it near the bed. M. Delthil has proposed to keep the patient in an atmosphere of turpentine and tar; but this is still on trial.

In regard to the proper moment for operating, Dr. Simon said, "In a general way tracheotomy is indicated at the end of the second period, that is, not until attacks of suffocation may occur, but you must judge of the proper moment by the state of the respiration *tirage*, or draught. You must judge of the degree of obstruction there is, and operate promptly if asphyxia be menaced.

"Through interference of parents, or some other cause, you may not be allowed to operate until the child is really *in extremis*. Even so, try it, as cures have resulted. The proportion of success is, in all cases, one in five with us. From four to seven years of age you have the best chance. Below two the hope of success is but slight." After speaking of Dr. St-Germain's rapid method of opening the tube with one stroke, Dr. Simon said it was only to be done by brilliant operators; and he then gave the method employed at present in this hospital, which he calls "the left-index method." Place yourself on the right of the patient, seize the larynx between the thumb and index of the left hand just as though you would enucleate it; with the index search for the inferior portion of the cricoid cartilage, from there make an incision about two centimetres long in the median line, taking in all the soft parts before the face of the trachea; put your index finger now into the wound, and give a second cut to clear all down to the trachea; then cut it exactly in the median line as long as the cut on the outside, and slip your finger now into it, stopping all blood from entering; then with the right hand take the canula and slip it over the nail of the index finger into the wound, and let it slide into its place; push it at first as though you were going back to the spine, then turn, and it will take in the front lip of the wound



and slip down over your nail; hold it for a moment while an aid ties the strings around the neck, and then clean the blood rapidly and place a gauze cloth over the mouth of the canula.

*Report of the Commission on Cholera in Spain and Dr. Ferran's Method of Anti-Choleraic Vaccination.*—This Commission, which consisted of Professor Brouardel, Dr. Charrin, and M. Albaran, has returned in haste to Paris from Spain, and Dr. Brouardel has submitted a long report to the Academy of Medicine. In brief, the French Commission are of an opinion that Ferran's method is, to say the least of it, very uncertain in its effects, and, owing to the fact that Dr. Ferran obstinately refuses to initiate foreign medical authorities into his method of attenuation, Dr. Brouardel regards him as an empiric, and he absolutely contests the validity of his discovery. Dr. Ferran gave the following answer to the Commission:

1st. That he refused to make known to them his process of attenuation of the virus of the cholera.

2d. That he would allow them to examine his liquid in his *own* laboratory, but that he would not allow a drop of it to be taken away.

3d. He proposed to the Commission that they would make a culture of the bacilli from the cholera-dejections and hand it to him, when he would attenuate it and return it to them.

The Commission refused, and returned to France.

It is only fair to give Dr. Ferran's reasons. He writes a long letter to justify his views. He says, "I commence by declaring that in regard to the prophylaxis of cholera there are two points of view that are quite different. The first one is the effects produced by the vaccination. This is the one that really interests humanity; and the second one is the manner in which I make the attenuated liquid. This last is quite apart from the first. What interests all the world is, Do the inoculations practised with my method really prevent cholera? and I claim that they do. That the second part interests all the world I do not believe, and I have particular reasons for not giving up, at present, my secret. After having worked a long time at these studies I submitted my results to my government, but I was received with a silence and an opposition that was trying. I received no help except from a few friends. I sacrificed all I had,—my health, my practice, and what little resources I had,—to find not the slightest assistance, even after I had proved the great importance of my discovery. I do not refuse to show my process to all the world if the government will recompense me in some slight way for all my trouble, as the German government did Dr. Koch. All the glory in

the world cannot recompense me for the pain I should feel if I should leave my children in poverty."

As the above will show, Dr. Ferran feels that some recompense ought to be given to him before he will show his method. It is not worth while to discuss these ideas. The real question at stake is, Does the inoculation prevent cholera? Dr. Ferran took the Commission to his laboratory and showed them some of the fluid that he uses. They noticed some *spirilla* in it of different lengths, and that its color was yellow, and thick.

The Commission make some criticisms on Dr. Ferran's laboratory and his mode of work and the instruments employed. They were then taken to see Dr. Ferran inoculate some twenty nuns, and saw that he injected with a syringe in the postero-external aspect of the arm. The persons inoculated presented, after twenty-four hours, some troubles that were ill defined, so that in fact the inoculations seemed to be inoffensive.

The following is the result in three towns in Spain where they have the cholera at present, as given by Dr. Ferran:

Alcira, population about 23,000. Not inoculated, about 12,000: taken with cholera, 374; deaths, 169. Inoculated, 10,000: taken with cholera, 37; deaths, 7.

Alberique, population about 5000. Not inoculated, 4000: taken with cholera, 192; deaths, 73. Inoculated, 938: cases of cholera, 10; deaths, 2.

Algemesi, population probably 10,000. Not inoculated, about 9000: taken with cholera, 484; deaths, 208. Inoculated, 1202: cases of cholera, 21; deaths, 5.

*On the Use of an Antiseptic Powder in Place of Iodoform.*—Dr. Lucas Championnière, at the last meeting of the Société de Chirurgie, gives the following formula for a powder to be used in place of iodoform alone:

R. Iodoform (tritured),  
Cinchona powder,  
Benzoin powder,  
Powder of carbonate of magnesia that has been saturated with essence of eucalyptus.

S.—Equal parts of each.

With this he uses the German wood-lint prepared. He first puts the powder on the wound, and covers it with the prepared wood-lint.

M. Gillet followed by stating that he used a powder composed of iodoform, powdered charcoal, sulphate of quinine, and mint. M. Marc Sée said that he used simply a powder of the subnitrate of bismuth with satisfactory results.

"*The Odors of the Human Body in Health and Disease.*"—This is the title of a new and very original work of a French author, Dr. S. Monin, which shows what can be done in

the way of original research in a new path of medical investigation. It is only a small book, but contains some very instructive remarks in a field of study that is usually quite neglected. The nose, indeed, is not as much used in diagnosis as it can be, and the intelligent physician can gain quite a lot of information if he would be as much of a Paul Pry as possible. An instance given is the bedroom of a woman in confinement, when acid odor of the lacteal secretion would indicate that the secretion was inaugurated, and an ammoniacal odor would cause a fear of the dangerous fever coming on. All the various odors are considered,—of the skin, breath, oral and nasal, expectoration, vomits, eructations, fecal matter, urine, the fact that typhus gives an odor of mice, the characteristic odor of cancer of the larynx, and much more that we have not space to tell of, but enough has been said to put your readers on a route of investigation that ought to interest them in a field of diagnosis that has been neglected in great part.

**Hysterectomy for Uterine Cancer.**—Dr. Tillaux, speaking at the Société de Chirurgie, gave an account of the above operation that he had just practised on a young woman of 20 who had a cancer of the cervix. The woman had metrorrhagia for six months, accompanied with a flow of a fetid liquid colored with blood. During this time her health broke down, and she had got very thin, having syncope often. Dr. Tillaux said, "On examination I found the os open as large as my finger, and walls ulcerated, having all the characters of a cancer. The *cul-de-sac* being free and the uterus being mobile, I thought it a favorable case for a complete extirpation of the uterus, and I proceeded to operate. The uterus was brought to the vulva (for this purpose I think that the large-mouthed pincers used in ovariectomy are the best, as they do not tear the tissue, which is already friable owing to the presence of the neoplasm). After having put a sound in the uterus to find its position exactly, I then cut the vaginal mucous membrane at its union with the neck of the uterus, and detached it from the os uteri, going up over its anterior face to the level of the attachment of the peritoneum, which I incised transversely. I did the same on the posterior portion, so that the uterus only held to the rest of the organism by the two broad ligaments. To cut these I introduced my finger into the peritoneum, and, passing back of the one on the right side, taking it up on my finger I passed the finger over after the other one. Over my finger I now slipped a ligature, and tied them all together. After I divided the mass, I united the two lips of the vaginal wound with one thread, putting a drainage-tube into the peritoneum. I filled the vagina with gauze (iodoformed), took away the drain on the fourth day, and in twenty-two days the patient left the hospital cured."

**New Apparatus for the Treatment of Fractures.**—Dr. Paul Meilhac calls attention to a very practical apparatus for fractures. It is one that is always at hand, and does away with a lot of hooks and bands that are often difficult to use. It is light, and elegant even, and costs almost nothing. It is simply the small cylinder of wood known as a "cachepot," made of light slips of wood crossing one another in a diamond-shape that allows the whole to close up or open to surround flower-pots. It may be had for a few cents (plain) at any florist's. Opening it and then introducing the member is the work of a moment. It can then be closed, when the angles of the diamonds become sharper, but still leave space enough to see between. A few rows of plaster hold it in place. Of course the fractured member is first covered with a good coat of wadding, at least on two sides. Besides the compression, this apparatus makes an extension, which is due to its construction, and will often prove useful. It also furnishes good, strong points to suspend the member when needed.

**On the Renewing of Prescriptions by Druggists.**—After a long discussion on this subject, in which was shown the danger to the public of allowing chemists and druggists to fill any doctor's prescription as often as it is presented, the Société de Médecine has given the following as its opinion:

1. That when a doctor prescribes any substance that is susceptible of causing an accident, he must write in full the dose, and the way it should be employed, and also indicate how often the druggist should renew it.
2. That the druggist should be compelled to write on the prescription the number and date every time he fills it.
3. That all solutions intended for hypodermic injection must never be renewed unless the physician gives a new prescription.

It was further thought by several members that it would be wise for druggists not to renew any dangerous prescription from any one they did not know, and to insist that doctors who want the prescription to be renewed should write on it, "To be renewed according to the demand of the patient."

**Preparation of Unguentum Hydrargyri.**—M. Yvon says it is easy to get rid of the disadvantages of preparing mercurial ointment with grease by using black soap. The preparation is just as good, and it can be cleaned off much better. Care must be taken to choose a neutral soap.

**Lactate of Quinine.**—Dr. Vigier calls attention to this drug again. He had spoken of its good effects given in a one-per-cent. injection for chronic gleet. He now recommends it as the best of all the salts of quinine for hypodermic injections. He is surprised that

this preparation has not been long ago adopted, as it is the most soluble of all the alkaloids of cinchonia. In fact, if we compare the solubility of the lactate to the sulphate, it is a wonder its greater solubility has not made it more in favor. It is also a product that has a regular and exact constitution, and it may be used in the same doses as the sulphate with certainty of producing an effect. The difficulty with the sulphate is well illustrated by the pomades or ointments that are often recommended to be made with it. The chances are that they involve only time and money wasted, as it is almost certain that not the slightest effect will be produced by their use. The lactate is one of the oldest, best known, and most neglected of all the quinine salts, while it is apparently the best and richest in actual quinine.

The hypodermic injection keeps well, gives no pain, causes no inflammation, and does not produce an abscess. The following is Dr. Vigier's mode of preparing the solution for hypodermic use:

R Quininae lactatis, 1 gramme;

Adipis præparati, 4 grammes. M.

S.—Dissolve by heat and filter. Each syringe will contain twenty centigrammes of lactate of quinine, which is a reasonable dose; but it can be doubled if needed.

*Decoction of Lemons in the Treatment of Blennorrhagia.*—M. Jullien gives the following as the treatment of an Italian doctor: Take three good-sized, ripe lemons and cut them in pieces, skin and all. Put them into an earthen pot and add three hundred grammes of water. Press them with wooden presser, and let the decoction boil slowly over a mild fire until it is reduced to one hundred grammes. Press through a cloth, and throw away the solid part, keeping the liquid, which is the injection. The number of the injections given was three or four a day, and the injection must be made fresh every other day. Such is the new remedy to destroy the gonococcus, and it is said to be most efficacious. The author says it should be commenced at once, during the acute period, and that in a few days the microbes will disappear and the patient begin to get well. M. Jullien himself had made use of a formula like it, adding salicylic acid to keep the injection from fermentation. He uses it only in the last part of the disorder, and for gleet, as follows:

R Acidi citrici, 150 centigrammes;

Acidi salicylici, 5 centigrammes;

Aquæ, 250 grammes. M.

S.—Two injections daily.

*Pomade for Retention of Urine.*—

R Extracti nucis vomicæ, 4 grammes;

Adipis præparati, 40 grammes. M.

S.—One or two inunctions in the lower bowel with a piece as large as a walnut in case of retention or stasis of urine in the bladder.

*Tannate of Mercury for Syphilis.*—Dr. Leblond recommends the following, after trying it in some five hundred cases of secondary syphilis. He thinks it is better than the other preparations of mercury:

R Tannate of mercury, 3 grammes;

Ext. and powder of liquorice, q. s. M.

Make sixty pills.

S.—One or two pills twice a day after meals.

*Menthol Cones in Paris.*—One of the most popular medicines of the day in Paris is a little tube or crayon called "Antimigraigneux," which is sold by the thousands; and one can see daily people in the street very industriously rubbing their foreheads and temples with them. And they certainly calm neuralgic pains. M. Mayet gives the following formula to prepare small plasters to take the place of these pencils. They are to be held on the painful part for a few moments:

R Menthol,

Chloralis, aa 50 centigrammes;

Spermaceti, 2 grammes;

Ol. cacao, 1 gramme. M.

T. LINN, M.D.

PARIS, July, 1885.

## PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JUNE 11, 1885.

The President, Dr. SHAKESPEARE, in the chair.

*Cystic sarcoma of thigh.*

DR. H. R. WHARTON presented a large tumor removed from the posterior portion of the left thigh of a patient in the University Hospital, under the care of Prof. Ashurst, with the following history. George H., aged 32 years; father living; mother died of meningitis; has brothers living and healthy. He noticed eight years ago a small tumor on the left thigh, posteriorly, about six inches above the popliteal space. Since that time it had gradually increased until it had become an oblong tumor larger than a man's head. The growth was accompanied by paroxysmal attacks of severe pain. He could not remember ever having received an injury at this portion of his body. The tumor was enucleated without difficulty, and in so doing about six inches of the sciatic nerve was laid bare, which was directly in contact with the sheath of the tumor. Some fibres of the semi-tendinosus and biceps muscles were stretched over the tumor. Upon examination, the tumor was found to consist of one large cavity, containing a reddish-brown fluid, surrounded by a thick fibrous wall varying in thickness from an inch to two inches, and at points presenting numerous points of calcareous degeneration.



tion. The inner surface of this wall was lined with irregular flocculent masses. Microscopic examination proves it to be a spindle-celled sarcoma, with areas of calcareous degeneration scattered through it.

The principal points of interest in this case are the large size of the tumor, the slow course of its development, and the ease with which it was removed without injury to the surrounding structures.

Dr. TYSON said that he was much interested in the cystic feature of the tumor. It would be interesting to determine if this cyst, which is a typical example of the cysts by softening, has an endothelial lining. He also asked the nature of the fluid contents.

Dr. DE SCHWEINITZ replied that he had failed in his efforts to make satisfactory sections, owing to want of time for decalcifying the growth. He had determined, however, that it was unquestionably a spindle-celled sarcoma. The cyst's chocolate-colored contents had been spilled during the operation.

Dr. BARTON said that at the previous meeting Dr. Nancrede had exhibited two growths with a similar clinical history and analogous histological structure. It would be interesting to examine both growths with reference to the character of the walls of the blood-vessels, to ascertain if any light could be thrown upon the non-malignancy of the so-called recurrent fibroid tumor of Paget.

Dr. NANCREDE remarked that he had at the previous meeting specially called attention to the fact that the *so-called* recurrent fibroid of Paget is a small spindle-celled sarcoma. The position which such growths occupy—viz., the subcutaneous connective tissue—does not seem a satisfactory explanation of their non-recurrence. He was under the impression that a careful study of their vessel-walls would demonstrate that they more closely approached those of a fibroid tumor than those of other sarcomata, in not being merely channels through the tissue, directly or almost directly in contact with the tumor-cells. Dr. Nancrede thought that the term "recurrent fibroid" was a good clinical one as applied to a certain class of sarcomata, since other tumors much resembling them in histological character pursue a very different course.

Dr. TYSON said that he had early made a study of these growths, first known as fibroplastic tumors of Lébert, and later named by Paget "recurrent fibroid," but now correctly included among the sarcomata of Virchow. Dr. Tyson thought that the explanation of its non-malignancy was found in the fact that the physiology of sarcomata varies greatly in this respect, some being scarcely more so than certain fibromata, while others vie with the worst cancers in this characteristic. The former are represented by the hardest of the sarcomata, which again are the small spindle-celled, which may be said to be the type of the recurrent fibroid of Paget. He agreed with

Dr. Nancrede that the term was a good clinical one, designating a small spindle-celled sarcoma recurring *in loco*, but seldom by metastasis.

Dr. FORMAD said that true tumors never have arteries or veins. Their blood-vessels are merely blood-channels without muscular walls, even in fatty tumors. The cancers are an exception to this. They have true blood-vessels and nerves, and hence are painful.

Dr. NANCREDE replied that, as Dr. Formad's statements were totally at variance with those of all reliable observers, he was not prepared to accept them at present, and still thought that careful study of the histology of the vessel-walls in the various sarcomata might reveal something of practical interest.

Dr. FORMAD said that to him the relative malignancy of these growths was plain. Spindle-cells can never move from their position, especially if the blood-vessels are small. The small round-celled sarcomata have small cells and are more vascular, and hence are very malignant,—i.e., give metastasis. Giant-cells never travel.

Dr. SHAKESPEARE said that the suggestion of Drs. Nancrede and Barton as to a possible difference in the blood-vessel-walls of sarcomata of differing malignancy was doubtless based upon the well-known fact that these growths become generalized through the blood-channels. It seemed to him a matter of interest, and also raised a point which might be found of importance, if properly investigated, as explaining the clinical differences. It was indeed true that the tendency to malignancy from metastasis was in large part due to the ease with which cells could be detached from their place, and this has as much to do with metastasis as the supposed mobility of elements. As to the condition of the vessel-walls in recurrent fibroma, he was very sure that in the primary tumors, which have been, after removal, diagnosed as pure fibromata, with numerous endothelial cells along the bands of fibrous tissue, recurrences have shown a change of type to perfect sarcomata: yet the blood-vessels in the first were those of connective tissue, while in the second they have the character of simple blood-channels.

Dr. HUGHES would like to call attention to the theory of a late German observer, that all sarcomata arise from the endothelia of blood-vessels. It is then easily understood how they become generalized,—the cells arising from the endothelium setting up the same change in the endothelium wherever they touch, while cells derived from other structures will have no effect. This distinction might be made between sarcomata remaining local and those becoming generalized, that the former arose from fibrous tissue, and not from endothelium.

Dr. NANCREDE desired to say, in conclusion, that he was perfectly familiar with the fact that mobility of cells had much to do with

malignancy, but he felt compelled positively to deny, upon the basis of experience, the so-called fact so positively asserted by Dr. Formad that large spindle-celled sarcomata never can become generalized, because from the form of their cells they must "stick" in the vessels. He had presented a specimen to this Society some years since of the most malignant growth he had ever had the misfortune to deal with (here followed history). He believed that Dr. Formad examined the specimen and had not then dissented from his opinion. He would relate other instances presented to this Society, but further remark was unnecessary, since all other observers except Dr. Formad had repeatedly called attention to the special malignancy of large spindle-celled sarcomata, except in certain situations. He would suggest that positive generalizations founded on any one observer's experience were apt to be delusive.

*Specimens from a case of pneumonia.* Presented by Dr. M. H. FUSSELL.

The subject from which the specimens were removed was a child, æt. 7 months, with a syphilitic history, who was attacked by convulsions. On the third day acute pneumonia developed, and death occurred on the twelfth day.

The autopsy showed characteristic lesions of catarrhal pneumonia in the right lung, with recent double pleural effusion and fibrinous deposit. The heart contained a chicken-fat clot extending into the pulmonary artery. There was also a limited area of pericarditis.

This case interested him from both its clinical and its pathological aspects.

Clinically, as to what relation the convulsions had to the lung-trouble. It was not until the third day after the first convulsion that any evidence of lung-trouble appeared, and until that time the patient was not apparently seriously ill between the convulsions. The lung-lesion was not *overlooked* until the third day, because he had made a careful examination at each visit. At first he supposed it likely the convulsions were due to the syphilitic taint, because of the absence of anything else to explain them; but the subsequent history of the case proved that they actually marked beginning of the lung-trouble. The entire absence of any cerebral symptoms in the progress of the case would go to prove this.

Pathologically, the case is interesting from the unusual amount of tissue involved in the pneumonic process, for it is the rule in cases of catarrhal pneumonia to have scattered patches of consolidation instead of, as in this case, almost an entire lung. It is also interesting to trace the sequence of the lesions found. Doubtless the first trouble was a bronchitis. This was soon followed by the pneumonia, which in turn gave rise to the pleuritis. The pericarditis doubtless arose from the irritation caused by the inflamed portion

of pleura overlying the base of the heart, for immediately under this spot is the seat of the greatest disease in the pericardium. So here the disease spread by both continuity and contiguity of tissue.

Dr. MUSSEY said that he could recall a case in some respects very similar. It was one of purulent pericarditis and pleuritis in a child aged 8 years, who had been rendered ill by exposure to cold seven days previous to Dr. Mussey's first visit. In the early history there were nervous symptoms so prominent as to lead to a diagnosis of cerebro-spinal meningitis. During the first week of Dr. Mussey's attendance typhoid symptoms were marked,—rapid respiration, extreme dyspnoea, rapid pulse. Purulent pleuritis was proved by the hypodermatic needle. Under stimulants, the child improved, but occasional dysphagia, pulsation of the veins of the neck, evanescent and—later—persistent aphonia were noticed. The heart was not displaced. Dr. Mussey did not make out the pericarditis. The child died suddenly of heart-clot. At the post-mortem, pus was found in the left pleura and pericardium, and no connection or evidence of extension, such as was found in Dr. Fussell's case, was detected here. The pericardial effusion had been overlooked. What, then, would have been the result of pleural tapping? The amount of pericardial effusion would certainly have influenced unfavorably the withdrawal of fluid from the pleural cavity, sudden death resulting. Hence a pericardial effusion should be looked for in all cases of pleural effusion, and in its recognition stress should be laid on the non-displacement of the heart, the absence of apex-beat and impulse, the presence of the pulsating veins in the neck, as well as aphonia and dysphagia, pressure-symptoms arising from a large pericardial effusion.

*Two specimens of sarcoma of the choroid.* Presented by Dr. G. DE SCHWEINITZ.

Dr. William L. Norris kindly permits me to exhibit these specimens, both the patients from whom they were removed having been under his care, the one in private practice and the other in the University Hospital.

J. McF., aged 21, applied for treatment at the Eye-Dispensary of the University Hospital three weeks ago. He stated that for three months the vision of his left eye had been gradually diminishing, and for the last month the eye had been totally blind. This loss of sight was accompanied by no pain in the eye; neither did he suffer from headache or ciliary neuralgia, nor was his own general health or nutrition in any way impaired. His occupation was that of a weaver, but there was no history of injury or inflammation. He was examined by Dr. S. D. Risley and myself, and the following account is taken from Dr. Risley's description at that time. The vision of the right eye was normal ( $\frac{20}{20}$ ); in

the left eye there was absolutely no light-perception. The pupil, under the influence of a solution of homatropin, dilated widely, but not so completely up and in as elsewhere. Using transmitted light, the eye looking directly in front, there was not the slightest reflex from the eye-ground. When the eye was slightly turned down, a small area of the ordinary red reflex was seen below, shut off above by an abrupt dark line curved downward. In this space detachment of the retina was easily detected. Oblique light showed a reddish-brown mass occupying the upper and inner half of the eye-ground, coming almost to the posterior plane of the iris, so near as apparently to exclude the lens. This, however, was present and not opaque. When the eye was strongly rolled down, the upper lid raised. Palpation over the ball detected an area of increased resistance and density as compared with the remainder of the eye. Over this region the perforating branches of the anterior ciliary vessels were enlarged and markedly tortuous. The general tension of the ball was not increased, apparently. The diagnosis of intraocular tumor was made, and the patient advised to have the eyeball enucleated. To this he consented, and Dr. Norris performed the operation. The optic nerve was cut off one-half inch from the ball, and the succeeding hemorrhage rendered the tissue about the oblique muscles so tense as to make it doubtful in the case of the superior oblique whether this thickening was due to escaped blood or to infiltration of the new growth. This suspicious orbital fat was removed. On section of the eye, the cavity is seen to be occupied by a melanotic sarcoma growing from above and out, leaving a small space posteriorly above and below, with detached retina and subretinal fluid.

The second case was removed by Dr. Norris from a girl aged 18. The history of the duration of the tumor is deficient. Here the new growth almost entirely filled the eye. The sections exhibited to-night show that the growth is composed of round spindle-cells, many of the cells of an epithelial type, and portions of the tumor separated into an alveolar arrangement by a fine vascular structure. The tumor may be classed as an alveolar sarcoma. The optic-nerve entrance shows atrophy of its elements, but no true infiltration by the new growth. A year after the operation no return *in situ* had occurred.

Dr. TYSON had examined the specimens with interest, and was at first at a loss to name the growth, as there were round cells of a connective-tissue type, epithelioid cells, and some suggestions of an alveoloid arrangement.

Dr. FORMAD thought that the growth should be classed as an alveolar sarcoma.

Dr. TYSON thought it was an alveolar sarcoma, the sarcoma carcinomatoides of Rindfleisch and others.

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Dr. SHAKESPEARE said that the growth was a most extensive combination of epithelioid and connective-tissue elements, evidently springing from the choroid, leaving the hexagonal choroidal elements untouched. There was also an evidence of dilatation of the blood-vessels and filling up of their lumina with detritus and perhaps proliferated endothelial cells and leucocytes. In one portion of the growth there is a channel with as perfectly-formed cylindrical cells as in an adenoma or cylindrical epithelioma. The fact that the patient has lived over a year since the removal of the eye free from disease would lead us to believe that the growth was benign. Whether it can be positively classed as a sarcoma was doubtful. By following around the section there can be no doubt that in the position represented by the section the retina is not affected, as the hexagonal layers of choroidal cells can be traced unbroken.

Dr. DE SCHWEINITZ said that the retina was certainly not affected.

Dr. SHAKESPEARE said that the non-recurrence of the growth was also against its sarcomatous nature, as the alveolar sarcoma was the one most certain of all to become generalized; besides, the growth contained germinal epithelial cells.

#### NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held May 27, 1885, the President, JOHN A. WYETH, M.D., in the chair.

#### EPITHELIOMA OF THE TONGUE.

Dr. C. W. KNIGHT presented a portion of the posterior part of the tongue, the seat of epithelioma, removed after ligation of the inguinal artery from a man 60 years of age. Before the operation pain had been relieved by the application of cocaine.

#### LIPOMA OF THE BACK.

Dr. L. WALDSTEIN presented a lipoma removed by Dr. Lange from the back of a woman 86 years of age. The tumor was the seat of an incurable ulcer, and had given rise to pain and other symptoms. The operation-wound had healed by first intention. The case illustrated the fact that fatty tumors might be present in persons markedly emaciated without becoming diminished in size.

#### ADENO-CARCINOMA OF THE STOMACH.

Dr. WALDSTEIN presented a second specimen, consisting of diffuse carcinoma of the stomach, the fungoid masses being present principally at the fundus and cardiac end: the pylorus was patent. The carcinomatous mass had evidently grown very rapidly. There were large quantities of granular detritus from the division of the nuclei, which had sometimes been mistaken for micro-organisms. There had been jaundice, supposed to be due



to carcinoma of the liver. A tumor about the size of a pigeon's egg was detected in the right mammary line; but this tumor was found to be the distended gall-bladder, the duct of which was partially obstructed by pressure from metastatic growths on the lymphatic glands in the porta hepatis.

#### DIPHTHERIA.

Dr. JOSEPH E. WINTERS presented the lungs of a child nearly 2 years old which had died of diphtheritic laryngitis of about two weeks' duration. During the first eight or ten days of the disease, the membrane, very tough and thick, was limited to the fauces; but finally croupy cough developed and dyspnoea became marked. Tracheotomy was proposed, but was rejected by the child's father. Death was due to exhaustion and asphyxia. At the autopsy the lungs filled the thorax well. Very little pseudo-membrane was seen above the vocal cords. For three-quarters of an inch below the cords there was considerable exudation; farther down there was only muco-pus and marked vascularization. The roots of the lungs and posterior surface of the bases were congested, while the anterior surface was distended and anæmic.

Dr. C. C. LEE asked Dr. Winters what had been his experience with Dr. O'Dwyer's laryngotomy-tube.

Dr. WINTERS had not endeavored to employ any of the tubes, they having been discarded so completely in France.

Dr. LEE thought this was scarcely just to the tubes employed in this city, where they had relieved symptoms and saved life where laryngotomy would probably have proved fatal. He would not say that the laryngotomy-tube would cure diphtheritic laryngitis; but he thought it might be employed in cases like the one described by Dr. Winters, where the parents refused tracheotomy.

Dr. NORTHRUP said that at the New York Foundling-Asylum the tube had been found to relieve urgent laryngeal symptoms almost immediately, even in cases in which the autopsy showed the presence of the membrane from the glottis to the finest bronchi.

#### MULTILOCULAR CYSTOMA OF THE RIGHT OVARY, WITH HYDROSALPINX, AND CYSTIC DEGENERATION OF THE LEFT OVARY, WITH SIMPLE SALPINGITIS.

Dr. R. W. WILCOX presented the specimens, removed from a woman 37 years of age, married, never pregnant, who had enlargement of the abdomen for fifteen years, which during the last two years interfered markedly with locomotion. Her physician treated her for dropsy, giving diuretics, which caused acute nephritis, from which the patient was suffering, together with general peritonitis, when first seen by Dr. Wilcox. The diagnosis of ovarian tumor was easily made,

and Dr. Thomas operated, removing a tumor of the right ovary weighing about forty-six pounds, which contained fluid of the "flax-seed-tea" variety. The tube was adherent to the tumor, and contained a yellowish fluid. The left ovary was also cystic, the tube adherent. There was a well-marked corpus luteum, menstruation having taken place ten days before the operation.

#### POTT'S DISEASE, WITH NECROSIS OF THE PRINCIPAL LONG BONES.

Dr. W. P. WATSON presented some specimens removed from the body of a child 5 years of age, which first came under his observation when three years old, when it was suffering from abscesses over the right thigh and over the right and left wrist, and from marked curvature of the cervico-dorsal spine. Extension produced marked relief. Finally, however, it became necessary to excise for necrosis a part of the right radius, the right knee, and the lower portion of the right femur. Death finally resulted from pneumonia, when there was found marked absorption of the bodies of the fifth, sixth, and seventh cervical and first and second dorsal vertebrae. There had been no paralysis, and the small amount of compression of the cord which was present in so great a curvature was remarkable.

#### THREE SINGLE AND FOUR TWIN PREGNANCIES IN SIX YEARS.

Dr. WATSON also presented a foetus of the sixth week, expelled by an Englishwoman of robust health, who had had three single and four twin pregnancies in six years. Only two of the pregnancies, single ones, went to full term. The woman entered the hospital to be operated upon for bilateral laceration of the cervix, which was done on May 21. She had menstruated on March 27 and May 1. Pregnancy was not suspected, but a few days after the operation a six-weeks' foetus was expelled.

A microscopic slide illustrating

#### INTRA-MENINGEAL HEMORRHAGE

was exhibited by Dr. W. P. NORTHRUP.

#### CELLULOIDIN IN MICROSCOPIC WORK.

Dr. W. P. NORTHRUP also presented a portion of the right lung, the whole of which had been hardened with celluloidin, enabling the examiner to make a complete section through the base. The process of hardening consisted in leaving the lung over-night in water, then for a number of days in a weak solution of alcohol, then in celluloidin, and again in alcohol.

#### THROMBOSIS OF THE LEFT CORONARY ARTERY; INTERSTITIAL MYOCARDITIS; FATTY DEGENERATION WITH DILATATION OF THE HEART.

Dr. J. F. RIDLON presented the specimen, removed from the body of a man 55 years of age, who had for some years suffered from

symptoms of dyspepsia. Some months prior to death he had been in good health. One morning he felt pain in the region of the stomach, and vomited. These symptoms were finally controlled, and the next morning he was feeling much better, but half an hour later was found dead. The autopsy showed a thrombus of the left coronary artery half an inch in length, marked enlargement of the heart, with interstitial myocarditis and fatty degeneration. The abdominal organs were larger than usual, but had not yet been examined microscopically.

#### MULTIPLE TUMOR OF THE UTERUS.

Dr. C. C. LEE presented the specimens, removed from a quadroon 26 years of age, of delicate constitution, and greatly reduced in health from an abdominal tumor, which was diagnosed by Dr. Lee to be an ovarian tumor, although he had never seen a pure ovarian cyst in the negro race. At the operation a multiple tumor was found, which had probably begun as a fibro-cyst and undergone colloid and partial cystic degeneration. At one point there was evidence of dermoid complication. The uterus had to be removed with the tumor, and, notwithstanding the patient's low condition, there had been no unfavorable symptoms since the operation, which was performed a few days ago.

#### EXCISION OF THE HIP-JOINT.

Dr. L. H. SAYRE presented the remains of the head of the femur, etc., in a case of morbus coxarius, in which he had performed excision at the hip-joint. The patient was 8 years of age, of phthisical family, born prematurely, and had suffered for a number of years, undergoing treatment by apparatus, etc., at the hands of various physicians. He had done well since the operation, which was performed two or three weeks ago.

Dr. Sayre also presented portions of the acetabulum and upper part of the femur, which had undergone necrosis, removed by exsection in the case of a girl 8 years of age, who had for some years undergone treatment by apparatus at the hands of physicians in different sections of the country. Abscesses had formed on the thigh, and the child had suffered greatly. The operation of exsection being performed, the limb was put up in a wire cuirass. The patient is doing well.

#### NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held June 18, 1885, the President, A. JACOBI, M.D., in the chair.

#### OBSERVATIONS ON THE OPERATION FOR LACERATED PERINEUM.

Dr. H. W. MITCHELL read the paper, and described the result of laceration of the peri-

neum in the production of rectocele, and also to some extent in the production of cystocele. As to the operation for the repair of this laceration, he thought it quite simple, and that any surgeon with a fair degree of skill and knowledge of the parts could perform it. The left forefinger was introduced into the rectum, and while two assistants made traction upon the lacerated parts the surgeon pared off the mucous membrane on each side by means of a curved pair of scissors, after which he would proceed to pass silver-wire sutures threaded on a curved needle. He thought that first to pass a silk suture and to draw the loop of wire through by means of this was a clumsy procedure. The sutures were passed, beginning at the rectum, the ends of the wires twisted, left projecting about an inch, matted together, and protected by cotton. They should be passed deeply, so as to make a firm body. Superficial sutures of silk approximated the edges of the wound. The operation was performed many years ago by Dr. Isaac E. Taylor, by Dr. Thomas, and by many others, and was simple, and gave successful results. He gave the histories of forty cases, in all of which union took place by first intention. In a number the lacerated cervix uteri was united at the same time. In only five were antiseptics other than cleanliness employed. The bowels were confined after the operation. The wires were withdrawn about the sixth or seventh day. The operation was secondary. The patients suffered very little pain.

Dr. A. C. POST, being requested to open the discussion, said the eminent success of the author's operations seemed to preclude criticism of the details of the operation or of the non-use of antiseptics. He preferred to keep the bowels free, and believed that this was now the custom. He was still inclined to favor the operation which he described before the Academy last winter.

Dr. MALCOLM MCLEAN asked the author how he accounted for the absence of pain in his cases, which other operators were so much troubled with when the sutures were passed outside of the mucous tissue. He thought it somewhat strange that Dr. Mitchell had found the ordinary method of passing the silver wire disadvantageous, when all other operators made use of it in preference to threading the wire directly on the needle. He also thought the curved needle objectionable, in that it turned in the forceps and was liable to break. The modern method of straightening the tissues and passing the straight, stiff needle was much better.

Dr. SIMON BARUCH, by invitation, thought the bowels should be kept open; that the straight needle was preferable to the curved one; and that Dr. Emmet's late method of passing the sutures only through the mucous tissue was preferable, and gave the patient little pain. He thought the author deserved credit

for his wonderful success, for his desire to simplify the operation, and for his discarding the old notion with regard to the perineal body being the support of the uterus.

#### CONTAGIOUS CONJUNCTIVITIS.

Dr. JOSEPH A. ANDREWS read a paper with this title, in which he first referred to the interest which the subject was attracting at the present time, and then proceeded to give some of the results of his experiments with the gonococcus in the production of ophthalmia, and also to review the literature of the germ-origin of the disease. Only a few instances were on record in which a pure gonococcus culture had caused gonorrhœal conjunctivitis in the human subject, and one of the successes obtained in this direction occurred in his own investigations. It appeared that the conjunctiva of animals could not be inoculated with the gonorrhœal discharge. The large number of cases of ophthalmia in the newly-born was pointed out, and its connection with the vaginal discharges seemed to be well established from statistics. In European institutions, and also in those of New York, it had been shown that cleanliness and means to destroy the activity of the contagion, as it might be communicated from the vaginal secretions to the child's eyes, had done very much towards wiping out eye-diseases in the children of such institutions. The percentage of cases of ophthalmia when such precautions were not taken was large, reaching as high as ten or more in a hundred, but with such precautions scarcely any cases occurred. Besides strict cleanliness in other respects, the child's eyes should be washed with a saturated solution of boric acid, and painted over with a two-per-cent. solution of nitrate of silver. As so many women were attended by midwives in this city, the special attention of this class of people should be called to the necessity for strict cleanliness, and for immediately reporting to a physician should the child's eyes become affected. When purulent conjunctivitis was fairly established, the indications were, first, to wash away the infected material as early and as thoroughly as possible; second, to render the conjunctival surface as nearly as possible aseptic. The washing might be done with a saturated solution of boric acid, or a two-per-cent. solution of carbolic acid, reducing the strength of the latter as the discharge decreased. The solution of nitrate of silver was two per cent., but if the case were severe it might be increased to four per cent., taking the precaution afterwards to wash with chloride of sodium. The after-dressing was by boric acid and vaseline. Lint off of ice might be applied to cool the eyes. Ice itself should not be used. Avoid ulceration of the cornea by division of the canthus, etc.

The Society then adjourned until the first Thursday in October.

#### AMERICAN LARYNGOLOGICAL ASSOCIATION.

THE American Laryngological Association held its Seventh Annual Congress in Detroit, Michigan, from June 24 to June 26, inclusive. Dr. E. L. Shurley, of Detroit, President of the Society, delivered a brief address of welcome at the opening of the Congress.

Dr. Shurley, giving the chair to the Vice-President, read a communication entitled *The Use of Galvanism in Chronic Diseases of the Pharynx*.

Having used galvanism for many years in pharyngitis sicca, he was led to employ it in other diseases of the pharyngeal mucous membrane characterized by glandular hypertrophy, hyperplasia, hypersecretion, and atrophy with diminished secretion. These constitute trophic disorders which are distinctly local, and may be benefited by local treatment, glandular hypertrophy and atrophy being attributable to perverted nervous function. He had employed various agents to correct these conditions, and of them all he had gained the most lasting effect from galvanism. He had also had good results from this treatment in severe forms of nasal catarrh, with engorgement and hypersecretion, and even in distinctly neurotic affections like paræsthesia he had found it beneficial. He recommended the prior use of cocaine solution before introducing the electrodes. He begins with two Léclanché cells, and gradually goes up to four or five, repeating the applications two or three times a week.

Dr. F. H. Hooper, of Boston, next read a paper entitled *The Respiratory Function of the Human Larynx*.

This paper was based upon a series of experimental studies in the Physiological Laboratory of Harvard, and was an inquiry into the physiological action of the abductor and adductor fibres of the recurrent laryngeal nerve, and particularly as to the relative frequency of disease in the two sets of fibres. His investigations led him to distrust statements which had been made regarding the proclivity of the abductor fibres to become diseased, and he pointedly observed that if unilateral paralysis of the abductor muscles were really such a common lesion, bilateral paralysis should not be so rare an affection. The term "extensor," as applied to an intrinsic laryngeal muscle, he considered incorrect. The movement of the arytenoid cartilages is one of rotation, not of abduction and of adduction. The posterior crico-arytenoids maintain the respiratory patency of the glottis, and are constantly in a state of semi-contraction: they are respiratory muscles with a special function. The rarity of disease of this muscle is a part of the immunity granted to the respiratory muscles, which, on account of their importance to life, are the latest to be attacked in various progressive, general, nervo-muscu-

lar diseases. Possibly a future investigation of this subject from the clinical standpoint may show that the positions which immobile vocal bands may assume may be explained on another hypothesis than that of paralysis of the abductor muscles.

Remarks were made by Drs. J. Solis Cohen, Harrison Allen, E. Fletcher Ingals, and B. Delavan, and the debate was closed by Dr. Hooper.

Dr. H. A. Johnson, of Chicago, read a paper on *Some of the Motor Derangements of the Larynx, with Cases*.

In this communication various illustrative cases were cited of the more common motor derangements occurring in the larynx, with suggestions for therapeutics based upon personal observation and experience.

Dr. Wm. C. Glasgow, of St. Louis, read a paper on *Certain Vaso-Motor Disturbances of the Nasal Membrane*.

In this paper three selected cases were reported to illustrate different types of nasal disorder in which inflammation was not present. He had noticed a series of cases characterized by great swelling and a profuse discharge of limpid fluid. These cases are analogous to hay-fever, and, in his opinion, are allied to it in their etiology and mechanism. He concluded that the condition is one of contraction of the arterioles due to increased tone of the vessels, caused by augmented action of the constrictors, the minute vessels being in a state of spasm and dilatation. The general arterial tension is increased, and the cavernous bodies of the mucous membrane become infiltrated with leucocytes and liquor sanguinis; to which must be added the liquefaction and increase of glandular secretions as the result of gland-stimulation. This theory of spasm of the arterioles is supported by the fact of the favorable action of remedies like atropine, which favor arterial dilatation.

Drs. Roe, Robertson, Mackenzie, and Allen discussed the paper.

Dr. John N. Mackenzie, of Baltimore, read the next paper, entitled *Reflections on the Etiology of Simple Inflammatory Affections of the Upper Air-Passages*.

Catarrhal affections of the upper air-tract he considered as a disease as old as the human race, perpetuated by predisposing and exciting causes which are still in operation; and the evolution of nasal, pharyngeal, or laryngeal disease in a given country is a part of its local history, and goes on *pari passu* with its varying meteorological conditions. After discussing the relationship of nasal and pharyngeal diseases to various forms of cachexia, and their dependence upon exciting causes proceeding from various sources, he declared that catarrh diathesis may be looked upon as a generic term for a multitude of varied physical peculiarities. Apart from direct local irritation as a cause

of inflammation, he claimed that it may be regarded as a law that the vast majority of catarrhal, pharyngeal, and laryngeal diseases originate primarily in inflammation of the nasal cavities, and he cited a number of cases to show that the chronic catarrhal inflammation is not due to any one special and particular cause, but is the resultant of the action of a number, both internal and external.

Drs. Cohen, Johnson, Ingals, Glasgow, and Allen participated in the discussion.

Dr. D. Bryson Delavan, of New York, read a paper on *Erysipelas of the Larynx and Pharynx*.

Two cases of this rare disease were reported in this communication. In one it commenced in one tonsil, in the other in the larynx. Both cases recovered; but in the first case the inflammation extended to the meninges and became chronic. The case became and remains insane.

In the discussion of the paper Dr. Cohen suggested the employment of pilocarpin hypodermically.

#### SECOND DAY.

The Librarian reported a flourishing condition of the library, it having been more than doubled since the last report.

Dr. Frank L. Ives presented the report of *A Case of Submucous Laryngeal Hemorrhage complicated by Cyst*, which was read by title and referred for publication.

Dr. Harrison Allen read a paper entitled *The Galvano-Cautery in Laryngological Practice*, in which, after discussing the special advantages of this mode of treatment, he described a new galvano-cautery snare, a modification of Jarvis's instrument, which can be used either as an écraseur or as a cautery.

*The Principles involved in the Construction of Spray-Tubes* were discussed in a paper presented by the Secretary for the author, Dr. Andrew H. Smith, of New York.

A number of new instruments and devices for applying the electric light were exhibited. Dr. Cohen showed a galvanic accumulator; Dr. Hooper showed the electric lamp and portable accumulator of Dr. Felix Semon and Mr. Vesey, made by J. Weiss & Son, London; Dr. De Blois presented a powder-blower combined with a laryngeal mirror; and Dr. Asch presented an osteotome and a modified Jarvis's snare. A number of other instruments were shown and discussed by the Fellows.

Dr. E. Fletcher Ingals, of Chicago, at the opening of the afternoon session, read a paper on *Leucoplakia Buccalis et Linguae, or Ichthyosis Linguae—Successful Treatment by Galvano-Cautery*.

In discussing the differential diagnosis of this disease, which has been recognized only for a short time, he defined it as a chronic affection of the buccal mucous membrane, characterized by thickening of the epithelium and the formation of white opaline elevated



patches, which usually become fissured and painful, and, after continuing for a long time, are apt to terminate in epithelioma. Two cases were mentioned in which cancer supervened in less than six months.

In the treatment, all sources of irritation are to be removed if possible, the digestive organs being often disordered. Permanent relief is afforded by the application of the galvano-cautery, and by its persistent and careful use the disease may be eradicated.

He concluded that (1) leucoplakia buccalis is an idiopathic disease, distinct from psoriasis, "smokers' patches," and syphilis. It is largely confined to men past middle life, but occurs occasionally in women. 2. The disease is so commonly found among inveterate smokers that the abuse of tobacco may be fairly claimed as an exciting cause, though cases also occur where tobacco has never been used. 3. It is chronic, and finally terminates, in a majority of cases, in epithelioma. 4. Internal treatment and local applications of sedative, stimulant, or caustic drugs are either useless or injurious, and the latter may hasten the development of epithelioma. 5. The actual cautery or galvano-cautery will probably enable us to cure many cases, if early and carefully applied, so as not to destroy the healthy tissue beneath the changed epithelium.

A general discussion followed this communication, the conclusions of which were generally accepted.

Dr. R. P. Lincoln, of New York, reported the details of a *Case of Melano-Sarcoma of the Nose cured by the Galvano-Cautery*.

This large growth was removed from the right nostril. It sprang originally from the inferior and middle turbinated bones and floor of the meatus; the septum was not involved. A year later there had been no return of the disease.

Dr. J. O. Roe, of Rochester, reported a case of the removal of an angioma from the nasal cavity, with an extended bibliography.

Dr. J. W. Robertson, of Detroit, read a paper on *Deformities of the Nose as a Factor in Nasal Catarrh*.

Premising the fact that catarrh admits nasal deformity as a factor, the lecturer proceeded to show that the causes of such deformity were frequently remediable, a large percentage being due to traumatism, syphilis, scrofula, tuberculosis, and allied diseases, causing necrosis, ulceration, and improper development. The age at which the deviation occurs is usually from the tenth to the twentieth year of life. The retention of secretions and dust leads to the production of catarrh, in the treatment of which hygienic measures, as well as appropriate treatment, are required. In children, care should be taken that the bony structures of the nose are properly developing.

Dr. Clarence Rice, of New York, read a

paper describing a successful case of operation for the removal of *Inflammatory Adhesions of the Soft Palate to the Wall of the Pharynx*, in which a tribute was paid to the late Dr. Elsberg as a successful and skilful operator upon these cases.

### THIRD DAY.

Dr. Beverly Robinson, of New York, presented a paper on *Alimentation in Laryngeal Phthisis*.

The writer advocated the use of cocaine to the ulcerated parts, in order to allow the patient to swallow more comfortably, but deprecated the use of tubes, preferring to employ nutritive enemata.

A paper by Dr. F. H. Bosworth, on the *Therapeutic Action of Cocaine*, and one by Dr. G. W. Major, on *Membranous Nasal Catarrh*, were read by title.

Dr. S. Solis Cohen read a practical paper entitled *Personal Experience with Some Recent Additions to the Materia Medica of Laryngology*.

Dr. J. S. Cohen opened a discussion on *The Efficiency of Mild Measures in the Treatment of So-Called Nasal and Naso-Pharyngeal Catarrh*.

An ingenious method of distinguishing hypertrophy from turgescence was described: it was by the introduction of a laminaria tent proportionate to the size of the nasal cavity. The lecturer believed that less radical measures than those now in popular use might often be resorted to with advantage.

The discussion was a spirited one, and the views expressed by Dr. Cohen were generally approved.

The following officers were elected:

*President*, Harrison Allen, M.D., of Philadelphia; *First Vice-President*, H. A. Johnson, M.D., of Chicago; *Second Vice-President*, Geo. W. Major, M.D., of Montreal; *Secretary and Treasurer*, D. B. Delavan, M.D., of New York; *Librarian*, Thos. R. French, M.D., of Brooklyn, N.Y.; *Member of Council*, J. Solis Cohen, M.D., of Philadelphia. The next annual Congress to be held on the last Thursday in May, 1886, in Philadelphia.

The Society then adjourned.

### AMERICAN OTOLOGICAL SOCIETY.

THE Eighteenth Annual Session of the Society was held at the Pequot House, New London, Connecticut, July 14, 1885, the President, Dr. C. H. Burnett, in the chair.

*Inflammation of the Attic of the Tympanum.*  
By SAMUEL SEXTON, M.D., New York.

The speaker considered the disease under two headings, acute and chronic inflammation of the attic, the latter presenting itself in the form of deep sinuses, leading from the inner end of the canal up into the attic, into the antrum, and sometimes penetrating the

membrana flaccida. This is often the result of acute inflammation in early life.

The atticus tympanicus is that portion of the tympanum lying above a plane extending transversely from the prominence of the inner wall formed by the external semicircular and facial canals to the auditory plate on the outside. Beneath this plane lies the atrium tympanicum; over the attic arches the tegmen, which also covers the antrum, the petromastoid canal, a varying number of cellules, and the Eustachian tube. The attic communicates freely with the antrum by means of the petro-mastoid canal of Sappey. The mastoid antrum lies behind and to the outer side of the attic, in the spongy substance of the mastoid. It is usually larger than the attic, and, as a rule, extends downward among the cellules of the mastoid process, giving off frequently a small passage communicating with the cellules overlying the external auditory meatus. The attic is divided below into two compartments (the inner being the larger) by the incus and malleus, the cord, ligaments, etc., which form a partial partition standing fore-and-aft. These compartments communicate freely with each other overhead, with the antrum below, the Eustachian tube in front, and with the antrum behind. The outer compartment is wedge-shaped, larger above, and shut in below by the close approximation of the large ossicles to the auditory plate, except anteriorly and posteriorly, where two small openings allow drainage into the atrium below. The inner compartment also communicates with the atrium by an elliptical opening surrounded on the inner side by the facial canal, and on the outer by the large ossicles, the cord, ligaments, etc. All of these cavities are lined throughout with mucous membrane.

Acute inflammation of the attic may follow catarrh of the head, the exanthemata, the entrance of fluids propelled along the Eustachian tube in bathing, or from the use of the nasal douche. The occurrence of inflammation of the attic from these causes is readily accounted for when we remember that the Eustachian tube opens by a free sweep into the attic as well as into the atrium. Irritating fluids seem to be better borne in the lower than in the upper part of the tympanum. Inflammation of the attic may be simultaneous with, consecutive to, or independent of inflammation of the atrium. It is the more serious from the fact that swelling of the mucous membrane clogs the outlets and prevents drainage. In such cases the membrana flaccida is red, the vascular turgescence extending above into the external auditory canal, and sometimes downward about the short process of the mallet. Should the disease progress farther, the inflammation may extend beneath the margo tympanicus of the auditory plate, followed by effusion of serum and blood pressing away the membrana flac-

cida and integument of the canal, and producing a bulging sac, so great sometimes as entirely to conceal from view the membrana tympani. In some cases rupture of blood-vessels leads to a sudden extravasation of blood.

Periostitis of surrounding parts may occur and extend along the surfaces of the canal. Inflammation may extend downward to the atrium, but as long as this does not happen and the membrana tympani is unaffected, there may be little deafness, though autophonia may be present. In nearly all cases inflammation extends into the antrum and mastoid cellules, or those overlying the external auditory canal or in the tegmen. If the escape of secretions into the atrium or Eustachian tube is prevented, the case is more severe, and extension to the cranial cavity more to be feared. Inflammation of the antrum often persists after the tympanum has healed, drainage taking place through the Eustachian tube or by a sinus through the cortex of the mastoid.

The treatment consists in drainage and the employment of such constitutional remedies as tend to check the inflammation and prevent the formation of pus, as aconite, calx sulphurata, etc.

Owing to the impossibility of making an accurate differential diagnosis between the pains of pachymeningitis and neuralgic pains of otitis media, the surgeon should be cautious about trephining the mastoid where pain is the only indication. It is manifestly useless to trephine after pachymeningitis has appeared. This question is one which must be left to the judgment of the attending surgeon.

#### DISCUSSION.

Dr. B. St. John Roosa, New York, asked Dr. Sexton to describe a case, indicating the manner in which he would use the remedies.

Dr. Sexton stated that the remedies are given in small doses, but these are frequently repeated. In this way the effect is quickly obtained. The moment there are symptoms of purulency he used the calcium sulphide, and thinks it controls the process.

Dr. Charles J. Kipp, Newark, was surprised to hear nothing said of inflation of the middle ear. This relieves the pain. Where there is protrusion in front of the membrane, incision gives relief to the suffering.

Dr. Theobald, Baltimore, had found the instillation of a warm solution of atropia of great service (four grains to the ounce). With this cathartics may be combined with great benefit. He had also used the pyrophosphate of sodium in fifteen-grain doses every two hours, keeping it up for four or five days, in cases of inflammation of the middle ear with the threatened mastoid implication, and was convinced that it is of real value.

Dr. C. J. Blake, Boston, spoke of the reduplication of the mucous membrane in the upper portion of the tympanic cavity, which

serves to separate the upper portion of the tympanic cavity from the lower, but tends to retain secretions. Dr. Sexton had not referred to the acute congestions of the upper portion of the tympanic cavity. He had lately observed a series of cases of this condition in which there was a history of overstrain and nervous exhaustion.

Dr. Sexton said, in conclusion, that he had used mercury and the sulphide of calcium for the last ten years largely, and was convinced that they are beneficial in certain cases.

*The Treatment of Chronic Otitis Media.* By W. W. SEELY, M.D., Cincinnati.

The speaker concluded his interesting paper with the following:

1. That only experience of sufficient length of time (often lasting over months) in each case can determine whether treatment shall be continuous (daily) or interrupted,—i.e., perhaps daily for a week, followed by an interruption of some weeks or months.

2. Only experience in each case can inform us whether treatment is to be entirely directed to the middle ear, or entirely to the naso-pharynx, or combined against both.

3. Only experience in each case can inform us whether injections into the *cavitas tympani* are called for. Under this head it was stated that direct medication, either of the middle ear or of the naso-pharynx, as routine treatment, was unwise till simple inflation had failed.

4. Mechanical dilatation of the tubes is rarely necessary or advisable. Only in extremely dry states of the tube is dilatation followed by much success.

5. Hearing-tests are not reliable, and hence patients with great deafness, great loss of bone-conduction, etc., should not be sent away till the test by trial has been gone through with.

6. Simple inflation failing, the greatest attention should be given to the naso-pharynx, even though it is in an apparently fair condition.

7. Syringing, douching, and swabbing the naso-pharynx should be abandoned.

*The Relations between Chronic Catarrhal Otitis Media and Chronic Rhinitis.* By CHARLES H. BURNETT, M.D., Philadelphia.

The following is an abstract of Dr. Burnett's remarks:

There is a constant causal relation between chronic catarrh of the middle ear and chronic rhinitis and rhino-pharyngitis. The latter is chiefly of the hypertrophic form.

The appearances of the *membrana tympani* in the first class are so diversified as to preclude a predication of the state of the middle ear and hearing from them alone. In the atrophic class, the symptoms presented by the *membrana tympani* are more uniform, and the surgeon is able to predicate from them more precisely concerning the aural disease. On the whole, however, the appearances of

the drum, taken by themselves, cannot aid greatly in the diagnosis of chronic aural catarrh.

Tinnitus aurium, as a rule, is more marked in the atrophic class than in the hypertrophic. There is also a greater patency of the Eustachian tube in the atrophic forms of aural disease than in the hypertrophic, though it is found in both forms of naso-aural disease. It is most relieved by treatment of the nares and naso-pharynx.

The treatment in the first class consists in cleansing and the use of astringent sprays, with applications of preparations of iodine never stronger than half-and-half. Nitrate of silver is not to be used at all in hypertrophic rhinitis. In the atrophic form, the treatment is the application of stimulant sprays, preferably nitrate of silver, not stronger than four grains to the ounce of water.

A word of caution is given in regard to the use of the galvano-cautery in the nares, since it, like the nasal douche, may lead to inflammation in the naso-pharynx and middle ear.

#### DISCUSSION.

Dr. Agnew, New York, thought that it was impossible to apply salves to the whole of the diseased surface. He had used the nasal syringe for twenty years, and was not prepared to accept the law that it should be abandoned.

While willing to agree with the views of Dr. Burnett, he thought that more stress should have been laid on the importance of hygiene, which is the most important element in the treatment.

Dr. Roosa thought that the main point in the majority of these cases was proper hygiene. Where there is diminished bone-conduction, he thought it unnecessary to go on and treat that patient.

Dr. Seely said that he had had more satisfaction from the use of ointments than from any other treatment.

*Afternoon Session.*—Dr. Sexton presented a conversation-tube for the aural instruction of deaf-mutes. By means of this tube the patient was able to hear his own voice and compare it with the voice of his teacher.

Dr. Graham Bell was then introduced, and called the attention of the Society to the great number of children who are classed in institutions as deaf-mutes, but who, under proper treatment and education, could be made simply hard-hearing members of society.

He also referred to the importance of otologists formulating a list of causes of deafness to facilitate the proper registration in institutions for this class of individuals.

*A Case of Fatal Ear-Disease beginning as a Circumscribed Inflammation of the External Auditory Canal.* By CHARLES J. KIPP, M.D., Newark, New Jersey.

The patient, a married woman, aged 28 years, was first seen nine months before her

death. Since the previous confinement, which occurred four months before coming under observation, she had suffered occasionally with severe pain in and about the left ear. There was swelling and redness of the posterior upper wall of the external canal. There was no perforation and no otorrhœa. Under the use of leeches, instillations of morphia, and inflation of the middle ear, there was decided improvement in the course of a month, when she passed from under observation.

Eight or nine months later, great inflammation of the external meatus appeared, the tympanum and middle ear not being affected. There was no evidence of mastoid disease. Severe headache appeared and continued. The patient gradually failed, and at last died, without any return of ear-disease.

At the autopsy there was found evidence of intense inflammation over the entire extent of the arachnoid and pia mater. There was a collection of pus immediately over the posterior surface of the petrous portion of the temporal bone. Pus was also found on the pons Varolii. A small abscess was found in the anterior part of the left lobe of the cerebellum, near its junction with the pons. The mastoid cells were filled with pus. There was only a thin exudation in the middle ear.

#### DISCUSSION.

Dr. Burnett reported a case similar in many respects to that of Dr. Kipp, in which the patient died from what was diagnosed as cerebral abscess, but no autopsy could be obtained.

Dr. E. E. Holt, of Portland, Maine, reported the present condition of a patient from whom teratoid tumors were removed two years ago.

*The Local Use of Cocaine and Brucine in Diseases of the Ear.* By Dr. C. H. BURNETT, Philadelphia.

Dr. Burnett had tried both, in painful affections of the ear, to produce anæsthesia. The speaker had found that neither the sulphate nor the hydrochlorate of cocaine was efficient when the pain of aural diseases was due to inflammation in dense tissues of the external auditory canal, as in furuncle of this part, or when acute inflammation occurred in chronically-thickened periosteal and mucous tissues in the tympanic cavity. The hydrochlorate of cocaine (four-per-cent. solution), however, is efficient to induce local anæsthesia in cases of not excessive congestion of the skin of the fundus of the auditory canal, and in the membrana flaccida of the drum-membrane, as is observed in acute coryza, and attended with pain of a not continuous or intense variety. But solutions of cocaine are not competent to produce local anæsthesia in the external auditory canal profound enough to permit painless incision into it.

The speaker had also employed a five-per-cent. solution of brucine with decided benefit.

*Does Cocaine Hydrochlorate, while Relieving the Pain in Acute Otitis Media, prolong the Congestion?* By Dr. E. E. HOLT, Portland.

The author was satisfied that while cocaine relieves the pain and for the time holds the inflammation in check, yet after the effect of the remedy passes off the inflammation goes on unaffected.

Dr. Theobald had found that in the nasal passages the drug exerted a similar effect,—that although it at first relieved congestion, yet the congestion returned, and was even greater.

Dr. J. O. Green had come to a similar conclusion.

*On the Desirability of Adopting a Uniform Method of Expressing the Results of Testing the Acuteness of Hearing.* By Dr. H. KNAPP, New York.

After referring to the various methods which had been recommended, the following nomenclature was suggested:

H. =  $\frac{24}{24''}$  Normal audition for watch.

V. =  $\frac{20}{20'}$  Normal hearing for whispered voice.

V. =  $\frac{20}{60}$  Normal for conversational speech.

V. =  $\frac{20'}{00}$  { Whisper or speech heard but not understood,—  
i.e., qualitative perception of sound.

V. =  $\frac{60'}{00}$  = o = Voice not heard at all. H = O, complete deafness for all sounds.

H. =  $\frac{C}{24''}$  { A watch of 24'' hearing-distance is heard in contact.

H. =  $\frac{Pr}{24''}$  { A watch of 24'' hearing-distance is heard when pressed on ear.

H. =  $\frac{M}{24''}$  { A watch of 24'' hearing-distance is heard when applied to mastoid.

H. =  $\frac{T}{24''}$  { A watch of 24'' hearing-distance is heard when applied to temple.

H. =  $\frac{D}{24''}$  { A watch of 24'' hearing-distance is heard when applied to teeth.

H. =  $\frac{Gl}{24''}$  { A watch of 24'' hearing-distance is heard when applied to forehead (glabella).

H. =  $\frac{V}{24''}$  { A watch of 24'' hearing-distance is heard when applied to vertex.

H. =  $\frac{Ub}{24''}$  { A watch of 24'' hearing-distance is heard everywhere (ubique).

To indicate that the watch is not heard at the places indicated, the following are used:

h. =  $\frac{C}{24''}$  = O, h. =  $\frac{M}{24''}$  = O, etc., means that the watch is not heard in contact, over mastoid, etc.

h. =  $\frac{Ub}{24''}$  = O means that bone-conduction for the watch is lost.

*Presbykousis.* By Dr. B. St. JOHN ROOSA.

The doctor applied this term to the failure of hearing which is incident to old age and which is not dependent upon inflammatory affections. It comes on after the age of forty or fifty years. Such persons hear badly in a noisy room. They hear the watch badly, but in a quiet room they can hear quite well. This is characteristic of this affection. In inflammatory troubles with the ear, the person often can hear pretty well in a noise,



while in a quiet room he hears badly. These three symptoms go together: diminished bone-conduction, hearing worse in a noise, and the disproportion between the ability to hear the voice and the watch.

The conditions on which this presbycusis are dependent have not been determined, for as yet there have been no opportunities for post-mortem examinations.

Dr. Sexton exhibited a glass ear-syringe and an ear-forceps with several attachments.

Dr. E. Dyer, of Newport, Rhode Island, reported a case of fistule of the helix in a girl of 14 which he greatly benefited by the application of the galvano-cautery.

The following papers were read by title: "A Case of Chronic Otitis Media Suppurativa resulting in Cerebellar Abscess, with the Autopsy," by O. D. Pomeroy, New York; "Otitis Media Suppurativa, Mastoid Disease, Pyæmia, Mastoid Operation, Recovery," by Dr. C. Bacon, New York.

The following officers were elected for the ensuing year:

*President.*—Dr. J. S. Prout.

*Vice-President.*—Dr. S. S. Sexton.

*Secretary and Treasurer.*—Dr. J. J. B. Vermynne, New Bedford, Massachusetts.

*Publication Committee.*—Drs. Vermynne, Blake, and J. O. Green.

*Committee on Membership.*—Drs. Carmalt, Kipp, and Theobald.

Dr. F. L. Capron, of Providence, Rhode Island, was elected to membership.

The next annual meeting will be held at the same place and time as that of the American Ophthalmological Society.

## GLEANINGS FROM EXCHANGES.

**THE CHOLERIGENIC MICRO-ORGANISM OF FERRAN.**—The Royal Academy of Medicine and Surgery of Barcelona has published a report on the memorial presented by Dr. Ferran to the municipality (*El Siglo Médico*, April 26, 1885). They arrive at the following conclusions. 1. The micro-organism described by Finkler and Prior as found in sporadic cholera is not the same found by Koch in Asiatic cholera. 2. The comma-bacillus of Koch only represents one phase of a micro-organism whose morphological evolution is complex. 3. The comma-bacillus of Ferran, obtained in Marseilles and cultivated in Tortosa and Barcelona, is identical in all respects with that of Koch, as is also the bacillus described by Van Ermengen. 4. The elaborate and conscientious studies of Ferran, confirmed by the commission, prove without doubt that this parasite includes the following phases: spiral filamentous thallus, appearance of spores in the thallus, their escape, growth, increasing heterogeneity of their contents, conversion into a mulberry-shaped body, escape of protoplasm, its condensation

and formation of a spiral, which is the thallus of new vegetations. 5. In certain phases of the cultivation, so-called oögonia and oö-spheres constantly appear. The part played by these demands further study, as do other less constant forms. 6. The injections of the cultivation-liquids cause a marked pathological action, frequently and even rapidly fatal; and, since this results from the inoculation of cholera-products, and from the phenomena observed during life and after death, its analogy with cholera morbus must be admitted. 7. In this infection, obtained by hypodermic injection, the gastro-intestinal disturbances and the symptoms due to them are naturally absent, while it presents the characteristics of rapid infection, with marked algidity, convulsive movements, apparently painful, and cyanosis, in guinea-pigs. 8. In the blood is noticed a constant micro-globulism, varying with the dose injected; it also contains cocci and disks of various sizes. This blood reproduces in broth and nutritive gelatin, either in tubes or in plates, all the forms characterizing the micro-organism; and these are again transmissible. 9. In man all the phenomena determined by hypodermic injection occur, but, as only smaller quantities of the virus can be injected, the symptoms are milder. 10. These facts have been in great part corroborated by Van Ermengen. 11. The facts described bring scientific conviction that the micro-organism producing cholera has been discovered and described. 12. The classification of the parasite is not yet possible to determine; more studies of the forms occurring in cultivations are necessary. 13. When the dose is diminished, or if the energy of the cultivation be attenuated by time or by the action of oxygen, injections in guinea-pigs cause slight disturbance, and leave them protected from the effects of larger doses and of more virulent cultivations. 14. In man, this protection is as evident as in animals. 15. These deductions lead to the hope that the means of avoiding cholera have really been found; but this cannot be affirmed without the test of an epidemic. 16. Various substances markedly poisonous to man do not impede the evolution of the microbe, and calabar even greatly favors it.—*London Med. Record*. [Compare with the following, and with the Paris Correspondence.—Ed. P. M. T.]

**HUTCHESON ON CHOLERA.**—Surgeon-Major Hutcheson, M.D., in a recently-published pamphlet entitled "Cholera, its Cause and Mode of Dissemination," states that cholera is but another name for an active vital organism which develops with fearful rapidity wherever, in ignorance and neglect of sanitary law, man has under certain circumstances reared his abode. There are two widely-different suppositions regarding the development of the cholera-germ. 1. That it is eminently contagious, and is propagated from

man to man. 2. That the cholera-germ is a zymogenic organism, and, like the ordinary septic germ, is air-borne, and differs only in the fact that it (the cholera-germ) has limits to its distribution under certain meteorological and other conditions which apply to most ferments. The English school do not agree with Dr. Koch in believing that cholera is a contagious disease and propagated from man to man. It is now accepted by Dr. George Buchanan and the best medical authorities in England that cholera is not contagious in the sense that it passes from person to person. Some, however, are in favor of the view that cholera is propagated by means of the discharges of the sick, whereas the view held by an intelligent minority denies the contagiousness of cholera, whether direct or indirect. It is certain that attendants on cholera cases suffer no more than others, and the author gives statistics in support of this fact; he then goes on to state that cholera obeys clearly-established and well-defined laws in its rise and dissemination, and declines and disappears in such a definite manner that no amount of acute reasoning can fix any relation between cholera and any directly contagious or seemingly contagious disease. Typical invading cholera has a period of incubation, and it takes from three to five days to produce a distinct epidemic manifestation, while fourteen days mark the limit of an advance of a typical epidemic. From statistics it is shown that in an epidemic the maximum death-rate is reached on or about the tenth day after the occurrence of the first deaths.

The following conclusions are drawn by the author regarding the etiology of the disease. 1. The diffusion of the reproductive elements of a micro-zymogenic organism is the cause of cholera. 2. Like an impalpable poison or miasm, the micro-organism is disseminated far and wide at maturity, under aerial and other influences and agencies. 3. The conditions under which the organism exists and is revitalized are external to man. 4. The cholera micro-organism is engendered in unsanitary conditions of soil, atmosphere, and human existence. 5. The micro-organism acts as a direct poison on the human organism, just as septic germs act on and destroy vital tissues by first interfering with vital function, then ultimately annihilating and destroying all vital activity. 6. Dr. Koch's bacillus is not the cause of cholera, but may be a concomitant of the cholera-organism in being generated in the special organic products of the disease. The history of cholera epidemics in India and elsewhere contains no proof that the disease has a tendency or marked predilection for, and wears out its virulence among, a people. It is certain, however, that it has a predilection for all places where unsanitary conditions exist, though the onward movement of an invading matured cholera-virus is usually in a definite direction,

irrespective of such conditions; and this involves a theory of its dissemination chiefly by aerial influences. There is no other known medium more likely to favor the distribution of germs than a dense cloud of aqueous vapor in a warm latitude. The history of the distribution of cholera in India is in many respects in accord with the meteorological record of the monsoon and other natural influences, which prevail with a marked periodicity over the entire country. The author concludes by stating that the cholera-germ can be deprived of its lethal power, before it gains a firm hold on the human constitution, by the administration of a weak mineral acid, and the best remedy to check choleraic diarrhoea is dilute sulphuric acid.—*London Medical Record.*

### MISCELLANY.

THE STATE BOARD OF HEALTH OF PENNSYLVANIA has been organized by the election of Dr. Germer, of Erie, as President, and Dr. Benjamin Lee, of Philadelphia, as Secretary, and has entered actively upon its work.

At the first meeting, at Harrisburg, July 2 and 3, immediately after the organization of the Board was completed, the following resolutions were unanimously adopted:

"*Resolved*, That the State Board of Health desires to express its hearty approbation of the energetic measures now being prosecuted by the health authorities of the cities of Philadelphia, Pittsburg, and Erie, in order to avert the threatened invasion of Asiatic cholera during the present summer.

"*Resolved*, That in house-to-house inspection faithfully and fearlessly performed it recognizes the only reliable means for discovering the actual sanitary condition of a city; and that the appointment in the city of Philadelphia of an officer who shall devote his entire time to the work of disinfecting such premises as are reported by the inspectors to be a source of danger to the public health affords reasonable ground for the hope that, with proper pecuniary support from the City Councils, these efforts will there be crowned with success.

"*Resolved*, That the State Board of Health regrets the suspension of the order of the Board of Health of Philadelphia directing the disuse and filling up of wells of drinking-water in built-up parts of the city, believing that all such wells, if not already polluted, must shortly become so, thus constituting a constant source and menace of disease.

"*Resolved*, That this Board pledges to the Boards of Health, Health Commissioners, and Health Officers of the cities aforesaid its vigorous co-operation in all action designed to avert pestilence from and maintain a high standard of public health in the ports of entry of this commonwealth, and will unhesitat-

ingly use for this purpose the powers which the Legislature has conferred upon it, and will also avail itself of such advantages as may accrue from its relation to the National Board of Health and the Boards of Health of neighboring States, to the same end.

"Resolved, That in view of the lateness of the season and the threatening character of the intelligence from the south of Europe in regard to the progress of Asiatic cholera, the Boards of Health or Health Officers of the aforesaid cities be requested to send at once to the Secretary of this Board copies of their regular reports, together with such other information as in their judgment it may be important that this Board should be in possession of, without waiting for the preparation of blanks by this Board."

The Board of Health of Philadelphia, by special resolution, has called the attention of the State Board to the subject of the pollution of rivers in our commonwealth, and especially to the Schuylkill River as the source of supply for this city.

**MALTINE.**—In the treatment of digestive disorders, which are common at this time of the year in adults as well as in children, the problem of feeding is often a difficult one to solve. Various forms of concentrated foods are now available, and form an important addition to treatment. The profession now generally recognizes the especial value in deficient or disordered assimilation of malt-extracts, in the manufacture of which important improvements have been recently made. At the Health Exhibition in London the combination of malted barley, wheat, and oats prepared by the Maltine Manufacturing Company of New York was especially distinguished by receiving the award of a gold medal.

Prof. Charles R. C. Tichborne (*Midland Medical Journal*), after an examination of the principal unfermented extracts of malt, finds that maltine is the richest in two of the most important ingredients in these foods,—namely, the phosphates, or bone-formers, and that peculiar farinaceous digestive agent called diastase. Maltine may be said to consist of about eighty per cent. of pure food in its most concentrated and assimilable form. This eighty per cent. may be divided as follows: five and a half per cent. of flesh-formers; seven per cent. of heat-givers; two per cent. of bone-formers; add to this the diastase, which imparts to it the curious power of digesting all farinaceous food outside itself, and we have in maltine a most valuable adjunct to our invalid diet. In respect to the diastase maltine seems remarkably energetic, and at the temperature of the human body one part liquefied "twenty parts of starch in two minutes," and had completely changed or digested that body in about an hour. Maltine possesses all the characteristics of a cereal

extract as prepared from the grain, and there can be no question about the genuineness of this preparation. It is only necessary to consult any work upon dietetics to see that there is considerable difference in the composition of the various grain crops. By combining these three important substances—barley, oats, and wheat—a food is obtained which represents the average composition of the three cereals, and that food already digested for use, a condition of immense value to the physician in those special cases where the digestive functions are impaired.

### OFFICIAL LIST

**OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY FROM JULY 4, 1885, TO JULY 18, 1885.**

**LIEUTENANT-COLONEL E. P. VOLLUM, SURGEON.**—To be relieved from duty in the Department of the East, on the expiration of his present leave of absence, and to report to commanding general, Department of the Platte, for assignment to duty as attending surgeon at the headquarters of that department. S. O. 159, A. G. O., July 14, 1885.

**MAJOR J. V. D. MIDDLETON, SURGEON.**—Leave of absence extended fifteen days. S. O. 159, A. G. O., July 14, 1885.

**MAJOR J. M. BROWN, SURGEON, CAPTAIN CLARENCE EWER, ASSISTANT-SURGEON, CAPTAIN A. W. TAYLOR, ASSISTANT-SURGEON, and FIRST-LIEUTENANT W. C. BORDEN.**—Ordered to prepare for field-service. S. O. 64, Department of the Platte, July 9, 1885.

**CAPTAIN VALERY HAVARD, ASSISTANT-SURGEON.**—Assigned to duty at Fort Wadsworth, New York Harbor.

**FIRST-LIEUTENANT M. C. WYETH, ASSISTANT-SURGEON.**—Assigned to duty at Fort Wayne, Michigan. S. O. 140, Department of the East, July 2, 1885.

**CAPTAIN W. W. GRAY, ASSISTANT-SURGEON.**—Relieved from duty at Fort Barrancas, Florida, and ordered for duty at Fort Columbus, New York Harbor. S. O. 147, Department of the East, July 13, 1885.

**CAPTAIN JUNIUS L. POWELL, ASSISTANT-SURGEON.**—Ordered from Department of the East to Department of the Missouri.

**FIRST-LIEUTENANT HENRY P. BIRMINGHAM, ASSISTANT-SURGEON.**—Ordered from Department of the Missouri to Department of the East. S. O. 155, A. G. O., July 9, 1885.

**FIRST-LIEUTENANT EDWARD EVERTS, ASSISTANT-SURGEON.**—Ordered for duty as post-surgeon, Fort McDermitt, Nevada.

**FIRST-LIEUTENANT A. S. POLHEMUS, ASSISTANT-SURGEON.**—Ordered for duty as post-surgeon, Benicia Barracks, California.

**CAPTAIN C. K. WINNE, ASSISTANT-SURGEON.**—Ordered for duty at Benicia Barracks, California. S. O. 68, Department of California, July 11, 1885.

**FIRST-LIEUTENANTS G. L. EDIE and C. S. BLACK, ASSISTANT-SURGEONS.**—Ordered for duty with troops en route to Department of the Missouri. S. O. 73, Department of Texas, July 10, 1885.

### LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FROM JULY 4, 1885, TO JULY 18, 1885.

**OWENS, THOMAS, ASSISTANT-SURGEON.**—Granted sick-leave for one month, July 14, 1885.

**BYRNES, J. C., PASSED ASSISTANT-SURGEON.**—Detached from the "Powhatan" for duty at Navy Yard, Norfolk, Virginia.

**CORDEIRO, F. J. B., ASSISTANT-SURGEON.**—To the "Powhatan," as relief of Passed Assistant-Surgeon Byrnes.

**CURTIS, L. W., ASSISTANT-SURGEON.**—To Philadelphia for examination preliminary to promotion.

**DRENNAN, M. C., SURGEON.**—Placed on waiting orders.

**FITZSIMMONS, P., SURGEON.**—Duty on receiving ship "Franklin," Norfolk Navy Yard, continued until July 1, 1886.